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Master's Thesis of Public Administration

**A Study on Transition of Health
Equity Fund to Universal Health
Coverage in Cambodia**

**캄보디아의 의료형평성기금에 의한
보편적 의료보장 확대에 대한 연구**

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ABSTRACT

A Study on Transition of Health Equity Fund to Universal Health Coverage in Cambodia

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Human health development has become one of the most fundamental development goals for Cambodia. With the necessity to improve health sector, the country has witnessed ongoing efforts on utilizing health financing as a tool to innovate better health outcomes and accessibility to equitable and affordable services as a move toward Universal Health Coverage for populations. As a critical mechanism of health financing, Health Equity Fund (HEF) was introduced to expedite process of universal healthcare along with major reforms in health policy. Within the position of least developed country, Cambodia is facing challenges in sustaining health finance for expanding Health Equity Fund to cover mainly large proportion of the poor who constitute majority of population in informal sector.

The thesis aims at examining national health financing system in Cambodia by studying experiences of health functioning and operation of

Health Equity Fund in such system in order to achieve the goal of Universal Health Coverage. The paper has analyzed progress and performance achievement of Health Equity Fund by examining how it has played a significant role in contribution to expansion of utilization of health service delivery, coverage of access to health services for target poor population and production of key performances of health system. It is noted that Health Equity Fund has demonstrated as transitional financing mechanism toward Universal Health Coverage. Achieving Universal Health Coverage by utilizing the role of Health Equity Fund is not comprehensively holistic. Sustainability in financing base for Universal Health Coverage remains incremental although Cambodia experiences efficiency of Health Equity Fund in enhancing health service provision and interventions on financial risks for poor beneficiaries. In Cambodia's development context as a low-income country, sources of funding are critical to operationalize health financing. However, the analysis from this study has shown that out-of-pocket health expenditure remains a dominance in funding while financial flow from external donors is on a downward trend. In other word, the attainment of universal healthcare is far out reach considering financial strength of resources to implement health financing schemes.

Keywords: Financing, Universal Health Coverage, Health Equity Fund, Health Financing, Health Expenditure.

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List of Acronyms

CDHS	Cambodia Demographic and Health Survey
CSES	Cambodia Socio Economic Survey
CRDB	Cambodian Rehabilitation and Development Board
GIZ	Deutsche Gesellschaft für Internationale Zusammenarbeit
HSSP	Health Sector Strategic Plan
HFC	Health Financing Charter
HC	Health Center
HEF	Health Equity Fund
MPSHI	Master Plan for Social Health Insurance
MOH	Ministry of Health
NGO	Non-governmental Organization
OOP	Out-of-pocket health expenditure
OD	Operational District
RH	Referral Hospital
SHI	Social Health Insurance
SFHF	Strategic Framework for Health Financing
THE	Total Health Expenditure
UHC	Universal Health Coverage

CHAPTER 1: INTRODUCTION

1.1 Research Background

Health and welfare protection of people are commonly concerned globally. Recently, this fact has increasingly pushed a popular concept of Universal Health Coverage (UHC) for different countries to move greater number of population closer to healthcare they really need. In this trend, health financing has significantly attracted shrewd attention from many governments in developing countries that wish to attain universal healthcare. This financial transfer has a potential to minimize social expenditure on maintaining people welfare. Like many developing countries, Cambodia is also implementing necessary health policy interventions for universal healthcare initiative.

The long-standing civil war from 1970s to 1990s caused Cambodia experienced economic stagnation and social isolation from global communities for over two decades. Remaining under severe situation of social, political and economic stagnation, there were plenty of things left for this war-torn country to restore state reconstruction. Bloody conflicts introduced Cambodia into a dark history, which caused the death of approximately two million of ordinary citizens including health professionals such as skilled doctors and nurses. The country political and economic system was left under jeopardy, and health system was not an exception. Physical health infrastructures, social assets, and human resources for health suffered

immense abolishment. The Paris Peace Accord in 1991 put an end to political unrest, internal conflict, and social fragmentation, ravaged by civil wars and weakened institutions. This crucial international accord introduced the country to its first national election in 1993. Since then, the elected government started to revitalize poor health service infrastructures and institutions by reestablishment of Ministry of Health where a reviving journey for health infrastructure, performance system, and quality of services departed from. State reconstruction has gradually rebounded and economic revival has steadily moved to a better situation. Likewise, health sector reform began to take more solid form such as initiation of Health Coverage Plan and endorsement of Health Financing Charter reform in 1996 in order to deal with poor coverage of health services for Cambodian population by initiation of user fee charging for accessing health services.

In general, many countries well describe access to health services as a basic human right that everyone, regardless of religion, race, or nationality deserve to receive. Likewise, Royal Government of Cambodia (RGC) has importantly recognized necessity of healthy workforce for its social and economic development entailed in national development strategy. Interestingly, health sector development is included in Cambodia Millennium Development Goals (CMDGs), which the government set up as a foremost sector to boost country social development and strengthen economic growth through provision of healthcare with better quality and accessibility. Cambodian constitution clearly stipulates the rights to health for all population, and emphasis on the poor in particular. Under this national

legislation, Article 72 states, “the health of the people shall be guaranteed. The state shall give a full consideration to disease prevention and medical treatment. Poor citizens shall receive free medical consultation in public hospitals, infirmaries and maternities”¹. Therefore, this central legislation importantly postulates as a guiding principle for government activities to provide quality assurance of health services and care of people, particularly healthcare needs for the poor. This means that the state must possess an obligation to ensure that its population could acquire healthcare. The poor hold privilege in receiving fee-exemption, which does not necessarily require them to pay for the healthcare cost if they are not able to pay.

The mission of Ministry of Health in Cambodia is targeting attainment of highest level of wellbeing through nourishment of enabling environment within health sector as a whole where all people access to quality and equitable health services. As usually the case, private facilities such as privately owned hospitals, and clinics complement public health systems for general health service delivery. Private health facilities outnumber those in public sector. Besides, the private ones often take a lead in attracting more patients who are sensitive to their health via obtaining quality service and care much about their health. Seeing this backdrop, Royal government of Cambodia has recently put efforts to expand access to public healthcare through enhancing quality service management to rural and urban populations who are usually dependent on private health service providers. As stated in WHO 2014 country health statistics, general government expenditures on

¹ Constitution of Cambodia at <http://www.constitution.org/cons/cambodia.htm>

health accounted for 6.3% of total government expenditure and 5.7% of total GDP in 2011. However, general health status for the population remains a challenging focus requiring more attention for improvement.

Health service delivery expended significantly with other subsequent key health policy reforms to target robust advancement in health sector for the impact on innovation of the country socioeconomic development status. As one of health reform initiatives, government has launched Social Health Protection and implemented financing mechanisms in order to achieve comprehensive health service with ultimate aim of meeting Universal Health Coverage for all of the population. Since 2002 following two year piloting from 2000, Health Equity Fund (HEF) has took its role as a decentralized pro-poor financing mechanism down to district level to help certain group of poor population seeking access to public health services with minimal financial burden toward payment for those services (Noirhomme, et al. 2009). Ministry of Health set up Health Sector Strategic Plan (HSSP1) 2003-2007 with the purposes of steering up health performance, service quality improvement with equitability and affordability. However, it was not until 2008 that the ministry began to establish comprehensive national strategic framework in Health Sector Strategic Plan to consolidate health financing system and institutionalize robust financing framework as a major strive for broader expansion coverage and better health service delivery. The most updated Health Sector Strategic Plan (HSSP2) 2008-2015 sets up strategic content to boost efficiency and effectiveness of health implementation with policies and strategies that outline more streamlined strategies action for intervention with

greater efficiency of health financing and health service delivery within public health sector in particular. Within this national framework, Ministry of Health has utilized resources to design certain health interventions and action plans in order to foster technical and resources management within healthcare system, particularly at capital-provincial level.

1.2 Problem Statement

In the last two decades, Cambodia has struggled to restore quality of health performance in service delivery and management within its weak health system although the country has accomplished noted progress in health sector development. Starting from 1993, Ministry of Health has established essential health policy, strategic plans and national programs to make way for revitalization of war-torn health infrastructure and delivery systems. The remaining challenge in delivery of decent health services to population, especially the poor, continues to persist amidst the weakness resulted from incompetent health workforce, poor health infrastructure, and inadequate financial stability for medical care have gradually captivated attention for solutions.

Recently, national health financing system has shown progress, but the pressing issue of low utilization rate of public health services still requires more robust attention. Comparing with private sector, the public ones are lagging behind in capability to deliver affordable and equitable services of good quality, which mainly contribute to a low rate of utilization by users with public facilities. Thereby, the ministry has strengthened health financing

system for social health protection and Health Equity Fund has emerged in attempts to improve accessibility to health service demands and retain population confidence on social protection against health risks. Cambodia still confronts with the issue of the poor accessing to healthcare resulted poor outcome of health service for its population. Thus, this backdrop results in hindrance for the target poor to get accessibility of funds on paving sustainable pathway toward achieving universal health coverage.

There is knowledge gap in comprehensive and systematic research on how institutional design and the performance of Health Equity Fund could contribute to making health service universal in Cambodia health sector. Implementation of appropriate health policy and financing reforms essentially require an understanding of health financing institutional arrangement and the extent to which the arrangement answers to the question of health service for all. Hence, this leaves a loophole, which enables this research study to investigate.

1.3 Relevance and Justification

In general, healthy life is what human desire as an integral prerequisite leading their life to reach happiness and wellbeing. Apart from being an important basic ingredient in individual life, health status of population, as a major engine of productive human workforce, could bolster economy and social development for communities and countries as a whole. Cambodian government has prioritized health development in its National Strategic Development Plan by investing a great proportion of total national budget on

strengthening health sector. In such spotlight, health service expansion has recently gain priority, which enables health accessible and equitable to users. However, the challenging task is to address repercussion of health financing to reach the poor population more productively.

It then demands strengthening health system to maintain positive health status of population and ensure that people wellbeing is well protected by government measures against risks of health shocks, especially the risks of healthcare spending. An extra burden for the poor to sustain their livelihood is due to incapability of families to pay for high cost of health services; consideration on improvement coverage of health services for all people is desirable safeguarding measure. It is essential that people, especially those who are vulnerable to risks of health-related payment, get protective measure so that healthcare cost will less likely be a concern for family, community, and social economy.

Therefore, observing health financing framework and its functioning affects progress of health coverage is complementary to our analysis on our understanding of service reform, allocation of finance, administrative improvement of health systems. The justification lies upon the analysis of official data on health service utilization, service coverage and trend of financial expenditure on health that aim to generate recommendations to deal with the pressing issue of universal coverage attainment more effectively and efficiently.

1.4 Research Questions and Objectives

The study intends to provide critical analysis on the functioning of HEF and to reveal the significance of HEF role in health financing system from 2002 to 2013 in order to understand the performance progress of health financing for universal healthcare. To accomplish research objectives, the study attempts to provide overview of health financing system and probe for answers to the core question on how Health Equity Fund could serve a sustainable influence on health transition to achieving Universal Health Coverage (UHC) in Cambodia. To answer this core question, some critical questions were presented as follow:

1. How is the role of Health Equity Fund in health service coverage?
2. What are challenges to sustain the financing health service coverage to attain universal healthcare?
3. What policy and recommendation should be made to enhance effectiveness and efficiency of implementation of national health financing policy for universal health coverage?

Hence, specific objectives of the thesis are to:

1. Study government health system financing by limiting its focus on exploring function of Health Equity Fund and its role on health system performance in transition towards achieving Universal Health Coverage (UHC)

2. Examine health financing performance by focusing on resource allocation, pooling, and purchasing of Health Equity Fund
3. Figure out applicable recommendation for possible policy reform on HEF to meet health financing objectives

1.5 Significance of Study

The study fundamentally relies upon literature review concerning theoretical constructs that adds scientific value to explain Cambodia experiences in health financing for Universal Health Coverage from qualitative analysis of theoretical framework generated from literature. It will further enhance our understanding on current move of health services to universal healthcare through descriptive analysis on health statistical data from Health Information System Database by Ministry of Health, National Health Account, which have been little examined from precedent literature. The missing link of systemic evaluation of national health financing system and its implementation impact on coverage of health services has not been comprehensively studied at national level. The research study intends to fill gap in current literature, which has mostly centered on assessment of Health Equity Fund on individual scheme.

The findings shall be beneficial to back up related research study as it attempts to add up body of knowledge and our understanding related of characteristics of health financing transition in terms of health accessibility, efficiency, and sustainability, of Health Equity Fund, which is decentralized health financing mechanism, on service coverage. The study will set insights

in addition to the precedent literature on health financing in other developing countries and it enables a reflection as policy lesson for Cambodian government to enhance the effectiveness of current HEF and similar health policy reforms. The findings will enable further platform to other interested researchers to further investigate on social health protection and policy challenges where the practices needed a better planning and implementation of health financing schemes.

CHAPTER 2: LITERATURE REVIEW

Health is one of basic needs for people, so maintaining healthy life and avoiding unexpected health risks are major components in the pursuit of quality of life. Healthy nation consists of healthy people where its government takes a lead in providing and enhancing health status for their citizens. Population wellbeing could serve as one significant proof that crucially signifies status of welfare of a country and it features one fundamental factor how government raises health status for their citizens. The poor and vulnerable groups confront unexpected risk to health shocks mostly involved with costly spending on healthcare and services delivery which are socioeconomic burden for the poor (Xu 2003; Kutzin 2000). From experiences across many countries, popular concept in coping with financial hindrance for health service users is to expend health service coverage, minimize health risks and citizen's health spending through covering healthcare cost with health financing interventions, which potentially diminishes the welfare cost (Kutzin 2013).

In a study in comparing efficiency in financing methods applied for universal coverage in OECD countries, Wagstaff (2009) emphasized the social determinant on financing method used in health financing that goes for universal coverage. He noted varying degree of influence of tax-based financing compare with that of social health insurance on rate of health expenditure, mortality, and labour productivity subjected to contextual difference of socioeconomic status and policy condition of individual

countries. Thus, it is important to consider the role of health financing scheme where social health insurance in health risk management is present in a state with well operated economy and health regulatory frameworks are in place. Also, (Xu 2003; Dercon 2005) argued that financing healthcare cost in the absence of health insurance can result in the negative influence on the welfare of households that push them into poverty.

A number of studies concentrated on identifying evidence of utilization impacts from HEF and they revealed mixed result of HEF impact from different examination of HEF schemes on change of service utilization. (Hardeman 2004) explored equity of services utilized at Sotnikum² HEF, the first implemented HEF scheme in Cambodia, identified no clear significance increase of health utilization by HEF beneficiaries. On the other extent, reduction in terms of worry over healthcare cost allowed HEF to render leverage concerning utilization of services for poor beneficiaries with significant accessibility to affordable services (Noirhomme 2007). While adoption of HEF pertains to operational setting, (Bitran 2002) likewise argued that HEF positively provide safeguarding with improved health service accessibility on pro-poor basis to diminish constraints in obtaining services due to household financial burdens, which entails an association between HEF benefits and service utilization.

To date, there are two prominent studies focusing on institutional context and policy environment of HEF. Ir (2010) conducted a study on institutional

² Sotnikum is one district in Siem Reap Province of Cambodia

arrangement of HEF, in which he noted association between social domains in terms of knowledge, policy context, and institutional factor with success of HEF and its role in health financing policy. Similarly, institutional arrangement for HEF plays a core value for successful functioning (Noirhomme 2007). The author emphasized improvement in management accountability and the necessity of knowledge of surrounding context in the implementation of various HEF schemes.

Debate on whether HEF should be operationalized as separated or combined scheme from user-fee health financing mechanism also emerged in the area of health financing. The main reason is that people's decision not to visit hospitals may be attributable to individual household inability to cope with spending in exchange for services offered at health facilities. However, in a study by Ensor & Cooper (2004), they found other physical factors such as distance from residence to hospitals coupled with psychological inclination not to go to health facilities towards health facilities. Either physically or financially, barriers to health seeking are significantly attributable to the impact on shortfall of service utilization. Furthermore, Annear (2008) noted positive relationship between user fee payment and the increase of service utilization rate in Cambodia national public health facilities. In Cambodia, the rate of user fee exemption stays low and inefficiently regulated, causing this kind of method to attract population to attain health services relatively unfavorable. Noirhomme (2007) noted that Health Equity Funds are more preferable than user-fee exemption method in a way that fee waiver results in

decrease in financial generation for health facilities, and increases incentive for extra informal charge of service by health staffs on service users.

Similarly, in one study of six different HEFs in Cambodia, Rithy (2008) observed that the poor are able to get equitable treatment from HEFs unless equity in the process of selecting the poor exist to reach the right group of people who are in real need of financial support to cover their healthcare spending. The problems arise in identifying the poor due to weakness in standard selection criteria for the poor, different procedures across funds coordinating agents, and multiple actors involving in implementation of funds. Functioning of social health protection relies on enabling conditions in management, coordination, and implementation of financing scheme.

Kutzin (2000) emphasized on the essence of national health insurance in improving physical and financial accessibility to health services of good quality that people need when they fall ill. In this regard, health financing system shall offer accessibility and affordability with quality health services to individuals and families while ensuring that healthcare spending does not deter them to seek healthcare services. The link of reform to health system to meet the demand of assisting people to reduce financial burden on healthcare is helpful for explanation the objective of service expansion for the population.

On the other hand, King (2007) argued against the notion that successful enhancement of utilization does not solely depend on social health insurance alone, but the increase in service coverage also requires favorable policy environment and regulatory tools to make the health system function to meet

its health objectives. Various studies have shown empirical evidence of the role of health financing model in order to explain cross-country experiences in applying it for universal coverage purpose. Whether social health insurance or other methods of financing prove effective in meeting universal coverage, it is better to evaluate health financing system within context of individual country.

2.1 Country Background Information

2.1.1 Demographic Profile

Geographical location of Cambodia stretches on the territory of 181, 035 square kilometers in size, neighboring with Thailand, Vietnam and Laos. According to World Bank 2015, country population has increased steadily since 1993. The number has grown reaching roughly over 15 million in 2014 with annual growth between 1.6% and 1.8%. Situated within South East Asia region, Cambodia is one of the countries where majority proportion of total population is residing in rural areas. The country possesses an interesting demographic feature, particularly known as a young country with relatively small territory featured by number of population comprising of 36 % of young population age 10 to 24 years and over 50% of population is under 25 years old.

[illegible]

Source: en.wikipedia.org/wiki/Cambodia

Population distribution significantly differ in relation to geographical locations between urban and rural areas. Cambodia Demographic and Health Survey 2010 reported that majority of population is mainly distributed in rural areas. Cambodia is largely an agrarian country, where society is dependent upon subsistence agriculture as the main source of income. Over 80% of total population lives in rural areas with dependence on agriculture production as rural livelihood. The latest report on Cambodia country poverty analysis published by Asian Development Bank in 2014 revealed that 19% of women and 17% of men live in urban areas. Population growth in urban has increased approximately by 3% in the last five years, from 19.5% in 2008 reaching 21.4% total in 2013. This steadily increasing number of urban population emerged with uneven population distribution between rural and urban areas.

Table 1- Country Population Distribution

	Population	Share of total (%)		
	1998	2008	1998	2008
Total	11 437 656	13 395 682	100.0	100.0
Urban	2 095 074	2 614 027	18.3	19.5
Rural	9 342 582	10 781 655	81.7	80.5

Source: National Institute of Statistics (NIS) 2009

In recent year, with population reaching over fifteen millions on a relatively small territory, general Cambodian health conditions, among its vast population living in rural areas, have remained in low condition with progressive improvement on major health outcomes and unpredictability of health risks due to household poverty and accessibility to affordable healthcare needs.

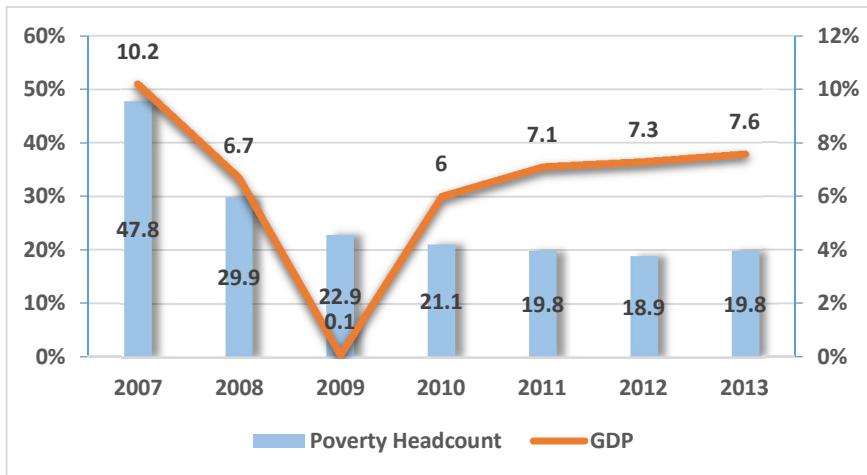
2.1.2 Socio-Economic Profile

Cambodia earns its reputation in terms of favorable endowment of resource rich in terms of natural mines, forest and fish; and good climate condition. Nonetheless, this country socioeconomic conditions do not reflect considerable gain in population wellbeing. Cambodia is largely an agrarian country, where society is dependent upon subsistence agriculture as the mains source of income.

According to Ministry of Planning, Cambodia, as one of the poorest nations in South East Asia, has achieved remarkable economic growth that

made it as a country to achieve MDGs goal by halving poverty rate from 47.8% (2007) to 19.8% (2013).

Figure 2- Trend of Poverty Rate



Source: Ministry of Finance and Economy 2014

Ministry of Planning 2013

Note: Poverty headcount estimates follow newly defined poverty line of Ministry of Planning (0.93\$/day) while international poverty line adopted by World Bank is 1.25\$/day.

With 1,090\$ GDP per capita in 2014, Cambodia has witnessed annual GDP growth rate around 7.5% on average between 2005 and 2014. However, the number of population under poverty line remained at 20% of total population, in which urban poor accounts for 4.3% and the number of rural poor comprises of 27.5% respectively (Ministry of Economy and Finance, 2014). The remarkable income growth shows a praiseworthy achievement in poverty reduction by half and economic boom. However, it does not explain a surprising trend since the income gap between rich and poor is widening due to uneven distribution of benefit from economic gains, unemployment, and human capital development. The number of population who were capable to move from poverty status was provisional (World Bank 2014). This means

that they still confront risks of returning into the poverty trap. Hence, socioeconomic condition and livelihood for Cambodian poor appear rather unstable with volatility of country economy and challenge of income inequality.

2.1.3 Health Profile

Cambodia has recently witnessed significant improvement in major health development interventions such as elimination of malaria, tuberculosis and fight against maternal and child mortality. Nonetheless, population health status and health performance in the country are still lagging behind other member states in ASEAN region and western pacific region. Concerning country health profile, WHO's statistics in 2015 indicated that Cambodia has shown significant progress of major health outcomes in moving forward to reduction of child and maternal mortality, which are main target indicators of health sector performance for millennium development goals. Out of a total population of 15,135,000 in 2013, 31% is population group under 15 years old, whereas those over sixty years old constitute another 8% respectively. In 2013, under-five mortality rate stood at 38 deaths for every 1,000 live births, which decreased from 45 deaths per 1,000 live births in 2010. This number was a promising health outcome against the baseline number of 118 deaths per 1000 live births.

Table 2- Key Health Indicators

<i>Total population (2013)</i>	15,135,000
<i>% of population under 15 (2013)</i>	31%
<i>% of population over 60 (2013)</i>	8%
<i>Median Age</i>	24
<i>Life expectancy (2013)</i>	75 (Female), 70 (Male)
<i>Under 5 Mortality per 1000 live birth (2012)</i>	38
<i>Maternal Mortality per 1000 live birth (2013)</i>	170
<i>Number of death in thousand (2013)</i>	86.5
<i>Number of live births in thousand (2013)</i>	388.8
<i>Fertility rate for women (2013)</i>	2.9

Source: WHO Global Health Observatory (<http://www.who.int/gho/en/>)

CDHS 2010 has shown that Cambodian men enjoyed an increase of average life expectancy in contrast to women who saw their life expectancy fell. Life expectancy for male at birth has slightly moved from 60 years in 2005 to 60.5 years in 2010 while women's average life expectancy fell from 65 years in 2005 to just only 64.3 years in 2010. Nonetheless, in absolute term women are expected to live longer than men do.

The number of death of children under five years of age for the period between 0 to 4 years is 35 per 1,000 live births. However, infant mortality rate is 28 deaths per 1,000 and maternal mortality ratio for Cambodia for the

period 2008-2014 is 170 deaths per 100,000 live births, decreasing from 206 per 100,000 live births in 2010 (CDHS, 2014).

2.2 National Health Financing

In Cambodia, Ministry of Health has put social health protection into practice to facilitate health service rendering in cost-effective manner. Social health financing mechanism appears more popular method than user fee, the model previously adopted in 1996, which appeared to distort the poor households from approaching health facilities when they fell sick. Improving health status and maintaining quality of live for general population are demanding tasks for Cambodian government. In essence, the state has obligation to establish clear health financing mechanisms supported by coordinative structural policies and strategic plans to ensure that population are not left behind in accessing affordable healthcare. The intangible obstacles lie upon the issue of inadequate financing efficiency in terms of administration and mobilization of financing resources that poses challenge to achieve desirable health performance. WHO address the importance of universal healthcare demanding a holistic move in health sector development forward on the path to achieving universal health coverage. Making health services available to people from all strata of society has gain widespread popularity and health financing conditions on health needs for population has blended with health policy initiatives of Cambodia. Ministry of Health pronounced Master Plan for Social Health Insurance in 2005, followed by adoption of Strategic Framework for Health Financing (SFHF) in 2008 in line

with HSSP2. It seems that Ministry of Health has just recently started to lay out its solid health financing policy. In fact, policy intervention on health financing dated back to 1996's introduction of Health Financing Charter with formulation of user fee policy that abolished free healthcare policy prior to the 1990s. The charter is a foremost foundation of regulatory financing roadmap for designing and implementation of financing mechanisms on service expansion and quality improvement for Cambodian population. Public health facilities received legitimate permission to collect user fee from patients upon consultation with local communities. Financing mechanism through user fee policy emerged in compliance with integration of government policy on national health reform as a part of post-civil war rehabilitation, following the country's national election brought situation back towards gradual socioeconomic revival.

In order to establish comprehensive financing framework, health financing is expected to operate in systematic and institutionalized mechanisms with concrete policy planning and implementation for resource collection, pooling and purchasing to bolster equity, accountability and transparency in health service provision in a more effective and efficient way. In this regard, institutional arrangement with strategic intervention development of health financing reform aims to mobilize additional resources for health and to support the package of health sector reform as whole.

With Health Financing Charter as the backbone, Cambodia established a Master Plan for Social Health Insurance in 2005 with a main purpose in

mobilizing different health financing schemes as a pooled system. One of noticeable aspects of health financing is that health financing schemes have operationalized through different frameworks with weak streamlined consolidation as pooled risk financing. Implementing agencies on Health Equity Fund operate financing scheme individually, monitor financial management, and assess quality of output of the schemes. However, in early 2007, Ministry of Health officially implemented Monitoring and Evaluation Framework for HEF to specify the details of performance tracking of the existing HEF schemes managed by NGOs.

The successful attainment of full coverage needs an active role of Ministry of Health to help bring population close to affordable healthcare under less financial driven system such as private out-of-pocket expenditure. Health financing schemes enable government to concentrate on expansion of service coverage, to narrow down inequitable rights to healthcare needs and to gear access to affordable quality services for the poor. Under social health insurance scheme, poor beneficiaries feel less risky and are able to reduce shocks from unavoidable health-related spending.

2.3 Understanding Health Equity Fund

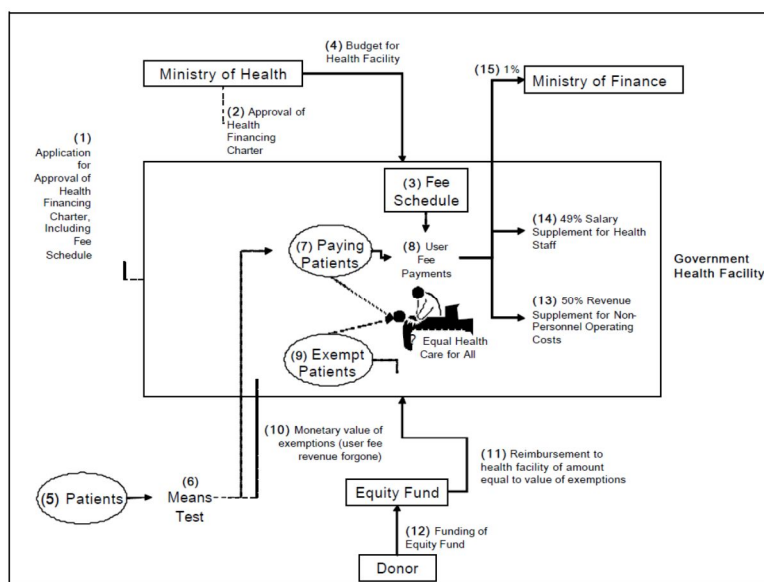
Accessibility of health services and financial capability to pay for health services by population incur government decision on adoption of social health protection schemes, which are financing commonly funded through government subsidized budget channel.

In the context of Cambodia, Health Equity Fund serves as one of cornerstone social health protection mechanisms to render target population group, considered suffering from poverty and vulnerability to earn decent capability to pay for healthcare cost. Holding major feature of financial reduction oriented, HEF offers financial safeguarding to allow patients access to health service free of charge with direct payment by the third party on cost of healthcare services delivered on behalf of patients to health facilities under the scheme. Although some HEF schemes require small share of co-payment from patients, beneficiaries commonly receive full coverage with reimbursement on expenditure for medical services during their stay at public health facilities and reimbursement on other related expenditure on transportation, food, and funeral...etc upon the completion of assessment on patient financial circumstances. HEF also differs from user-fee exemption in a way that outside financial supporters give patients HEF health reimbursement while user fee falls under responsibility of health facilities to provide for patients.

According to Ministry of Health, Health Equity Fund is a social-transfer through providers, under the contract of the program, to offer the target poor opportunities with income transfer so that they are capable to afford the cost of payment of health services at public health facilities. It is a third-party payer scheme, in which local agents (usually NGO) and communities manage the operation for real poor patients. The objectives of the equity fund are to improve access to hospital care for the poor by reducing the cost of

hospitalization, to enhance accessibility of service coverage, reduce OOP expenditure and to improve quality of health services.

Figure 3- Operation of Health Equity Fund



Source: Bitran (2002)

The HEF scheme runs under supervision of international NGO with funding from either solely government fund or government fund combined with health development partners or in some cases through community collections. The key principle of HEF is that patients do not necessarily need to bear cost for treatment or healthcare cost and patients receive proper financing compensation for their stay at hospitals. The third-party contributors, who are implementing agencies for selected health facilities, shoulder healthcare cost with reimbursement on patients' health related spending. Without pro-poor health equity fund, health facilities can charge on ordinary population at normal rate for service expense and the patients have to pay for

related expenditure within the period of their stay at hospitals. Under HEF operational framework, patients are also able to receive non-medical benefit packages covering cost of transportation to health facilities, food, and other expenses incurred with illness in addition to medical cost.

Figure 4- Operational Flow of HEF & User Fee Financing



Source: Noirhomme (2009)

Recently, HEF has gained considerable recognition of its value from implementing agencies and health partners for the possibility of scaling up to render broader access of healthcare services for the target poor population beyond 2015. Since poor people are subject to unpredictability of falling sick and insecure financial capability to bear with emerging healthcare expense, HEF demonstrates integral objectives to help eligible people, particularly the poorest group, prepare against such healthcare shocks, possible risks confronting financial difficulty and accessibility to services upon their appropriate needs and time.

2.4 Health Expenditure

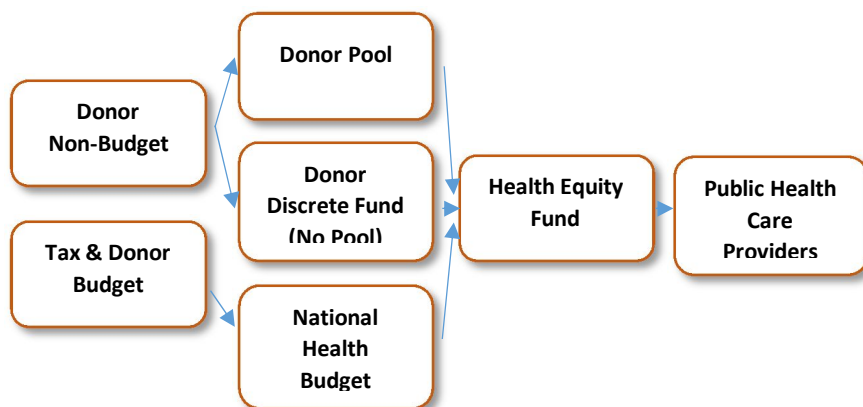
Moderate proportion of government health expenditure as a share of total health expenditure and high out-of-pocket health expenditure are major dimensions to describe characteristics of financial resource spending for

healthcare operational system in Cambodia. Excessive amount of out-of-pocket health spending is a crucial challenge deterring the low-income level population to enhance better accessibility and affordability on healthcare needs. Such expenditure is somehow a stimulant to push for government consideration on health financing policy and strategic reform to shape necessary implementation that mitigates the impact on private financial burden on household for health related cost.

Within health financing context of Cambodia, the major contributing sources of expenditure comes from individual out-of-pocket payment of service users. This fact explains a barrier for users to get access to healthcare with lesser concern over expense for utilization of services and health treatment at health facilities. According to WHO National Health Account on Cambodia, general population spend approximately 76\$ per capita on healthcare cost, which illustrates significant amount of payment on health-related concern. The average budget from national contribution to healthcare expenditure illustrates varying degree of health expenditure in Cambodia healthcare system. Cambodian government has put efforts on improvement of health coverage with financing it has provided for health facilities. Contributory expenditure from government has increased in recent years and it has reached significant share in total health expenditure. As can be seen from total health expenditure and out-of-pocket payment, government expenditure on healthcare is remarkably lower, compared with private expenditure from household.

Private health expenditure is the leading source of health financing for Cambodia health sector. This type of financing mostly comes from out-of-pocket expenditure from services users. Such fiscal environment portrayed Cambodia as the country whose health sector has relied upon large dependence on payment from people, as health service users, to pay health facilities to function. Surprisingly, out-of-pocket health expenditure on private health facilities is one of the highest amount compared with other nations in Western Pacific Region. Tangcharoensathien (2011) also noted remarkable higher rate of private health spending in Cambodia in comparison with other South East Asia nations. Along with incomplete policy implementation to control private health practice, facility operation and private healthcare providers invites concern over informal charge of healthcare and other relevant cost. Individual households bear responsibilities over 60% of healthcare spending while only around 25% of the total spending comes from government contribution.

Figure 5- HEF Financing Channels



Source: Adapted from Bigdeli (2009)

2.5 Identifying the Target Poor

The absence of certain standard framework to identify the target poor causes difficulty and affects effectiveness to choose the right poor people deserve for HEF. Current assessment tool for poor household identification is developed by Ministry of Planning. However, the persistent problem lies upon the mismatch in different assessment criteria to access conditions of households for their poverty level. The general identification of poor for financing beneficiaries needs to proceed through two different methods such as pre-identification and post-identification, or the these two methods combined (Annear, 2010). Noirhomme (2009) noted that the two major methods involve coordinated intervention among health service providers and HEF implementers, usally NGOs, located at facilities under HEF contract. He further specifies procedures of the two methods in identifying eligible target poor households for HEF where pre-identification occurs prior to patients access to health facilities visits with identification of poor households through reliable local actors such community leaders. Post-identification occurs after or at the point of time that patients seek for health services at facilities. However, the two main identification methods have demonstrated different accuracy and effectiveness, in which post-identification method could produce guaranteed better assessment results with some HEF projects, while pre-identification method works better with other schemes (Annear, 2010).

The registration of eligible beneficiaries often requires verification through closed mean test interview with the target households to assess their

poverty status and financial constraint to healthcare expenditure. In Health Equity Fund Implementation Guideline of Ministry of Health, prior to be considered eligible as HEF beneficiaries, the identified poor have to follow selective evaluation process by HEF implementers. The general conditions for assessment include investigation on household income, family and poverty background to find out financial viability to pay for healthcare cost. Other relevant appraisal conditions are varied depending on which methods facilities and HEF implementer use to identify real beneficiaries.

CHAPTER 3: THEORITICAL BACKGROUND AND RESEARCH METHODOLOGY

This chapter covers theoretical review of selective models of assessment on functioning and performance of health financing scheme, analytical framework, and research methodology, which the study is based for analyzing and interpretation of findings from this research study. To achieve this end, the research attempts to examine trends of healthcare expenditure, service utilization, and health service coverage with consideration on Health Equity Fund schemes in provision of affordable, efficient, and accessible services for attainment of universal healthcare under institutional policy of national health financing system. The analysis of the study rests upon a descriptive tool developed by Carrin (2008), which is widely applied for health context of developing countries to analyze functioning of healthcare financing mechanism. The framework follows the review of precedent literature on health financing and universal health coverage.

3.1 Theoretical Concept of Universal Health Coverage, and Health Financing

The concept of universal healthcare has recently penetrated into central health policy in many emerging countries, who are attempting to bring affordable, equitable and broad-based health services deep into people demands at all levels within society. WHO defines Universal Health Coverage as access for “ensuring that all people can use the promotive, preventive, curative, rehabilitative and palliative health services they need, of sufficient

quality to be effective, while also ensuring that the use of these services does not expose the user to financial hardship”.

Barrier from health-related spending could be upsetting hindrance deterring patients from visiting medical care, which offer health intervention they deserve to access. WHO (2010) strongly emphasizes the role of health financing in achieving Universal Health Coverage to ensure that people do not confront with financial constraints to access affordable healthcare needs. Protection people from risks of healthcare cost helps setting up a safeguard against financial catastrophe that poor people might face when they have to bear with spending on illness. Thus, in order to achieve universal health coverage, health financing system needs to operate with clear health system objectives and sufficient financial resources in its structure to enable feasibility in operation in allocating resources to people to get affordable care with secured capability to shoulder the healthcare cost. WHO (2010) emphasized the essence of availability of funding within health financing in order that accessibility to both public and private healthcare could be realized under the rubric of three main objectives for desirable performance of health financing as follow:

1. To collect sufficient and sustainable resources for health;
2. To pool resources to ensure that everyone has financial access to health services
3. To use these resources optimally to purchase health services

WHO (2010) defines health financing as “function of a health system concerned with the mobilization, accumulation and allocation of money to cover the health needs of the people, individually and collectively, in the health system”. Carrin (2008) viewed health financing in a broader social context, which is associated with political and economic structure that shape health system finance.

Discussion over universal health coverage attainment has commonly mingled around two financing mechanism in health system functioning that government in different countries commonly use to accomplish universal coverage, namely funds collected from tax as a risk pooling and those collected from contribution from social health insurance on workers, self-employed individual, and government as single or multiple funds. Kutzin (2000) noted the two central models of health financing as “Beveridge Model” and “Bismarck Model” respectively. Different government may choose to adopt either one of the two models exclusively or in combination of the two types of financial sources for funding healthcare in applicable ways with individual country development and health context. WHO (2005) found that many low and middle-income countries have adopted social health insurance to achieve universal coverage although methods of administration of the scheme is varied across countries. However, the question of efficiency, and sustainability of the model remains commonly shared concerns for these countries when considering the role of health financing for universal health coverage.

In a study on experience of different countries in moving for universal healthcare, William (2011) found commonalties from successful countries, which had achieve universal health coverage such as Japan, Chile, and Sweden. The transition to universal healthcare generally goes through three stages as follow:

- Initial phase emphasizes on helping the poor to healthcare access in which NGOs play larger role than government in financing funds and voluntary contribution from association, community, and individuals.
- The second step proceeds to transition from contribution on voluntary basis to mandatory one with greater government intervention
- The final step is the reach of universal healthcare where all health system including both private and public are concentrated into one program under national health financing system with broad-based, inclusive access to healthcare under concrete government intervention.

It is important that the mechanism improve the efficiency with reduction in healthcare cost to lessen barriers for people to search for affordable services when needed. The common dimensions from health insurance rests upon the way of collection of funds, what type of service demand, how to make them as pool fund for co-payment to target population covered under the scheme. Although the concept of universal healthcare is universal in its meaning, the

interesting point of analysis on health financing is that different countries follow their financing strategies in their distinctive style such as risk pooling or separate schemes.

Regardless of what type of financing model a country chooses to undertake, accomplishment of health performance with solid strategies in health financing and health policy framework that fits in country development context to support financing implementation is important for attempts to reach universal healthcare. Therefore, when scholars investigate performance of health financing system, it is relevant to examination of various theoretical models applied in assessment of functioning of financing mechanism.

In order to analyze the functioning of health financing scheme in Cambodian context, the study considers the following three components of conceptual approach on evaluating health-financing system, proposed by Carrin (2008). The study would gain comprehensive understanding on functioning of Health Equity Fund that will be examined and specified in the following sections. Achievement of universal healthcare necessary requires the following three health financing functions operate in optimal potentials.

3.1.1 Resource Collection

According to Carrin (2004), resource collection generally refers to process how collection of funds is made and where the funds are collected or contributed from for example, donors, government, enterprise, household...etc. The fund collection will explain how government and agents

in charge of managing health financing gather revenues for their program operation. Developed countries tend to apply taxed-based health financing for their healthcare delivery since most of people work in formal sector. Otherwise, developing nations, whose population are more employed in informal sector such as Cambodia case, is more inclined to a mixed financing method that combine different sources of funding from beneficiary contribution premiums, tax, government subsidies and partner counterpart funding. Likewise, Cambodia mainly follow mixed methods as national financing mechanisms while Cambodia health sector expenditure largely comes from government revenue and external source of funds from NGOs, stakeholders and international donors.

3.1.2 Pooling

Carrin (2004) describes pooling as “the accumulation and management of these revenues in order to spread the risk of payment for healthcare amongst all members of the pool; and thus individual persons no longer bear their risk on an individual basis”. Similarly, Kutzin (2000) refers pooling to mobilization of pre-payment of revenue on healthcare from population. Pooling allows the sharing of responsibilities of health financing implementers within the pool group to shoulder each other risks in payment for healthcare to beneficiaries. Thus, pooling enables our examination on the channel of collection of different sources of funds by different agencies as a combined revenue to implement health financing schemes. The pooled funds differ across sectors, ranging from government funds, private sector insurance

premium, to funds managed by NGOs. The allocation to purchasers as combined unit of funds to make as a single pooling or multiple pooling varies across agency collecting the funds.

3.1.3 Purchasing

Kutzin (2000) postulated that purchasing is “the transfer of pooled resources to service providers on behalf of population for which fund were pooled”. Purchasing embodies type of benefit packages for purchasers and its function will enable the assessment of health services, which are parts of benefit packages. Purchasing mechanism adopted to select services explain the goal of inclusive health objective for purchasers. Investigation of purchasing of service will enable this research to identify characteristics of service delivery to the enrolled group receive that will illustrate process of collection and pooling of funds in health financing system in order to explain inclusiveness of HEFs and pro-poor supportiveness.

3.1.4 Health Financing Efficiency and Equity

Defining equity is complicated to achieve since its vague concept differs across different social contexts. According to WHO Health Systems Strengthening Glossary and the International Society for Equity in Health (ISEqH), equity in health is defined as “the absence of systematic and potentially remediable differences in one or more aspect of health across population subgroups defined socially, economically, demographically or geographically”. For Whitehead (1992), equity in healthcare means the fair

treatment in terms of opportunities to fair access health benefits for any individual without exclusion by any means. Although equity in health financing has not achieved a common understanding, the central concept of equity is associated with the notion of sharing in payment from the better-off to the worse-off based on ability to pay and no clear criteria on full understanding of equity (Mathauer 2009).

Equity requires the attainment of efficient health financing. The concept of efficiency measurement in healthcare domain highlighted the assessment on the extent that organization optimize utility of money and available healthcare resources in program operation towards achieving organizational goals (William 1988; Palmer 1999), production of tangible health outputs or outcomes including number of patients hospitalization, waiting time...etc (Palmer 1999).

Efficiency shall target optimal use of limitation of resources to raise overall health level within social setting while excluding broad aspect of utility (James, 2005). Achievement full coverage of universal healthcare necessarily requires optimal coverage that depends on sufficient and efficient inputs of resource into health intervention in accordance with different country context (Chisholm & Evans 2010).

Proper resource allocation may result gain in health outcomes for efficient economy through utilizing available resources in health sector (Weinstein, 1977). According to a comprehensive study on efficiency measures in health sector, Hussey (2008) examined 588 literature and

categorize efficiency evaluation into three different measurement levels from evaluation objectives of program, inputs used to outputs produced, and program implementation. The author found that average length of stay (ALS) and patient discharge or number of out-patients at hospitals were dominant measurement attributes in published literature. Efficiency can often be understood through looking at the average length of stay in hospitals since it explains the relationship of reduction of health cost from hospitalization to shorter stay at hospital (OECD 2013).

Once fiscal environment and policy orientation in health financing go in consistency, the fruitful outcomes of health programme implementation could be more likely realized, which is the main point Carrin (2008) noted in her model. Carrin (2008) posited that efficiency health financing for UHC transition need to take into account of the system of financing scheme from different historical, political and economic context of individual country. Efficiency requires a consideration on who should provide and what kind of health services needed to deliver to the beneficiaries.

A key issue in efficiency evaluation is variation in measurement constructs across existing literature (Hussey, 2008) and there have no defined clarity of commonly agreed model to measure implementation efficiency of health financing in a broad social context (Milstein & Lee, 2007). The study therefore will follow Hussey (2008) analytical model, which is considered as one contextualized analytical model to enable comprehensive evaluation of efficiency in HEF financial administration and it will specifically concentrate

on examining knowledge of health financing objectives concerned with efficient health service provision.

3.1.5 Sustainability of Revenue

An important dimension for health financing is financial or fiscal sustainability in the discourse over universal health coverage. OECD (2015) defines fiscal sustainability as “the ability of a government to maintain public finances at a credible and serviceable position over the long term” without huge burden of debts in accordance with country socioeconomic development trend. Similarly, Whitman (2009) linked the term sustainability from financial perspective with “ability to continue and keep a program going beyond initial, external funding and to have it become an ongoing part of an agency’s program and services.” Otherwise, from institutional perspective, sustainability of health mechanism depends on degree of institutional integration of mechanism into central health policies and objectives (Proctor, 2011).

Various scholars from literature have attempted to develop a number of scientific models to elaborate on concept of sustainability and appropriate appraisal measurement within health program. While program design was the main part of assessment condition on health program sustainability in Sarriot (2004), sustainable financial flow from external funding to support operation of health program is central theme of assessment model by Lafond (1995) and Bossert (1990). Otherwise, Renaud (1997) placed emphasis on community participation in financial contribution processes as a main driver of

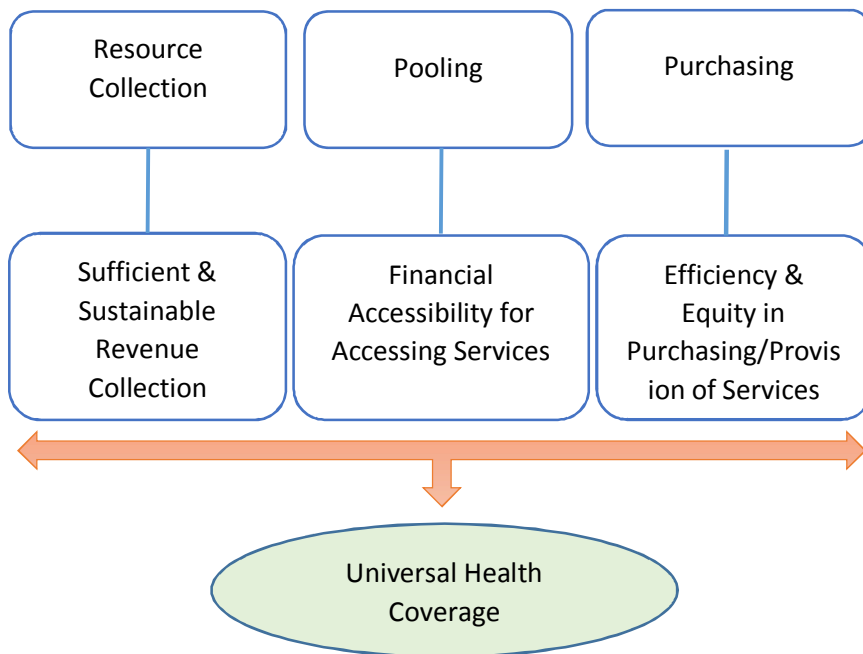
sustainability assessment. It is important that financial sustainability require an understanding of its conceptual meaning within policy context and examination on health expenditure on service delivery and enhancement of available resources in health system against existing fiscal constraints (Thomson, 2009). There remains vague understanding on the meaning of financial sustainability and its policy implications in health system debate (Thomson 2009). Thus, sustainability revenue in this study follows Carrin (2008) on assessment of health financing analytical framework with synthesis of conceptual definition from OECD (2015) and Whitman (2009) for financial sustainability of HEF. The details of assessment indicators are presented in the following section of analytical framework.

3.2 Analytical Framework

Based on consideration of chosen methodology and the review of the literature, this study followed a descriptive framework model developed by Carrin (2008), which has been widely employed by World Health Organization to conduct analysis of functioning and organizational practice within health financing system in middle and low-income countries.

Through the analytical framework, the analysis must be defined and are determined by the three key dimensions of health financing functions including resource collection to support financial arrangement, pooling of healthcare revenue, and purchasing or provision of health services, which the study adapt to make analysis in Cambodian health contextualized and feasible.

Figure 6- Analytical Framework



To accomplish research objectives, the study therefore focused on examining operational functions of Health Equity Fund on the process of moving health intervention towards strategic objective of universal health coverage. The study intends to conduct assessment of the system by concentrating on qualitative evaluation of health financing objectives and institutional policy of HEF, which will be supported by descriptive analysis method on major health financing dimensions as detailed thereafter. Reviewing the literature, this study adopted key analytical indicators on health financing as follow:

Functions/Major Dimensions	Indicators
Resource Collection	
Sufficient Funding	<ol style="list-style-type: none"> 1. Level of Funding <ul style="list-style-type: none"> - Government health expenditure per capita and as percentage of GDP - Total health expenditure per capita and as percentage of GDP 2. Level of population Coverage by HEF 3. Level of financial risk protection <ul style="list-style-type: none"> - Ratio of prepaid contribution to THE - Percentage of household with catastrophic health spending
Sustainable Revenue	<ol style="list-style-type: none"> 1. Ratio of external funding and government funding as share on total health expenditure 2. Fiscal viability by tax revenue strength such as income tax and value added tax VAT

Pooling	
Financial Accessibility	Level of Pooling <ul style="list-style-type: none"> - Percentage of HEF scheme are pooled - Compulsory in all/some compulsory coverage of dependents of contributing groups under HEF
Purchasing	
Equity in purchasing services	Level of Equity in health financing <ul style="list-style-type: none"> - Equity in service utilization by gender and economic quintile
Efficiency in service provision	<ol style="list-style-type: none"> 1. Average length of stay 2. In-patient (IPD) and Out-patient rate (OPD) under HEF 3. Health facilities coverage rate (number of ODs, RHs and HCs under HEF schemes)

3.3 Research Method and Data Collection

The study applies both qualitative and quantitative method in its analysis. The methodology posits in descriptive analysis, focusing mainly on characteristics and trend of health expenditure, health service utilization, and coverage rate of target beneficiaries under Health Equity Fund, which

research questions aim to answer. Moreover, qualitative method examines theoretical and literature review on institutional policies and objectives pertaining to health financing in the process of achieving universal health coverage.

The process of collecting and locating relevant online resources, books, journals, peer-reviewed articles, and gray literature related to the research topic are conducted. The searching employed were both mixed method with online and manual search to collect information and trace relevant necessary literature for comprehensive analysis. The research study synthesized theoretical review and crosscheck data of health financing information extracted from WHO, national health information database and available sources from expert groups in the field of Cambodia health financing.

3.4 Data Sources

National survey data from Cambodia Demographic and Health Survey, Cambodia Socio Economic Survey, and WHO are employed as primary sources of data. The body of other secondary data, which depends on desk review, are framed in the investigation of previous literature. Reports on health related policy, statistics, and regulations in national health financing and strategic documents on social health protection issued by Ministry of Health and stakeholders are given particular attention to examine transition in health sector.

3.5 Data Analysis

Following collection of necessary inputs from different sources, data analysis begins with grouping information and statistical data collected from desk review and empirical studies for interpretation. Data will be analyzed on the reference to theoretical ground developed from literature and descriptive analytical tools on health financing program adopted by WHO in order to generate analytical arguments that develop understanding of research problem. Health statistics from 2002 until 2013 including utilization rate, OOP, government health expenditure, number of health facilities...etc following indicators specified in theoretical framework will be collected and analyzed accordingly.

CHAPTER 4: ANALYSIS AND INTERPRETATION

This chapter presents analysis and interpretation from descriptive analysis on key health statistical data to evaluate performance and function of Cambodia's Health Equity Fund within health financing system for the process of health sector innovation to universal healthcare. Analysis draws upon identifying insights on how to improve current health coverage, efficiency in service utilization with sustainable health financing mechanisms. The analysis is organized based on indicators purposefully selected from literature in this study with evaluation of the three main functioning of health financing framework, including resource collection, risk pooling and purchasing of services.

4.1 Resource Collection

The essence of revenue collection is considered a primary requisite for health sector development to progress operational function of health financing towards overarching goal of universal healthcare. In so doing, the effort to bring more ease in accessing care at health facilities and to mitigate the impact of excessive spending beyond ability to pay for public health service by Cambodian poor population may help mitigate unaffordable health-related spending with government subsidized funds and deviating health payment from out-of-pocket money.

Public healthcare system depends on three main sources of expenditure such as funding mobilized from service user's payment in the form of out-of-pocket health expenditure, government national health budget, and donor financial assistance as fundamental financial basis for general support on overall operation of health financing system to facilitate delivery of health services toward financing scheme beneficiaries. Total health expenditure is comprised of 60% from out-of-pocket, 25% of government contribution with another 15% of health partners' external funding (Health Statistic Report 2012). Large proportion of expenditure is derived from payment of individuals by using their private earnings or household income as out-of-pocket money for health. The country is still challenging against massive health expenditure from service purchasers' OOP. Massive amount of OOP poses a major financial constraint for the poor population to gain access to healthcare, which demonstrates loophole in mobilizing resource for health. In 2012, total expenditure for HEF was 9,457,954 US Dollar with 16% went to administration and operational cost (MOH, 2012).

4.1.1 Level of Funding

4.1.1.1 Total Health Expenditure

In general, per capita health expenditure rose to 75\$ in 2013, which is threefold higher than the amount spent ten years ago. Drawing analysis of health expenditure from National Health Account of Cambodia, health sector has experienced remarkable change in trend of total healthcare spending over the last ten years from 2002 to 2013. Health expenditure has seen steady increase in total percentage for expansion of financing schemes in comparison

with rising income level in terms of GDP growth. On average, cumulative annual increase around 5.5% has been witnessed, despite drastic plummet of expenditure to 3.5% in 2007. This sudden drop of total health expenditure set an interesting point since Cambodian economy was at the starting hit from 2008's global financial crisis and population income was negatively affected with a sudden drop to the lowest point 0.1% in GDP growth at the similar point in time. However, the figure quickly rebounded back for the following years, in particular 2008 and 2009 by 2% and it kept annual steady increase until 2013. It indicates that pattern of mobilizing health financing fund has changed in accordance with fluctuation of country economy viability.

Table 3- Total Health Expenditure

Year	Total Health Expenditure per capita (US \$)	Total Health Expenditure (% of GDP)
2002	19.93	5.91
2003	24.12	6.6
2004	25.74	6.34
2005	27.17	5.77
2006	22.52	4.2
2007	21.91	3.49
2008	40.54	5.46
2009	46.04	6.26
2010	45.55	5.82
2011	48.84	5.56
2012	69.47	7.35
2013	75.76	7.52

Source: WHO National Health Account

From the table 3, the volume of total health expenditure generally fluctuated from 5% to 6% with the latest percentage reaching to 7.5% of GDP in 2013. This figure is noticeable higher than common target of 5% of GDP

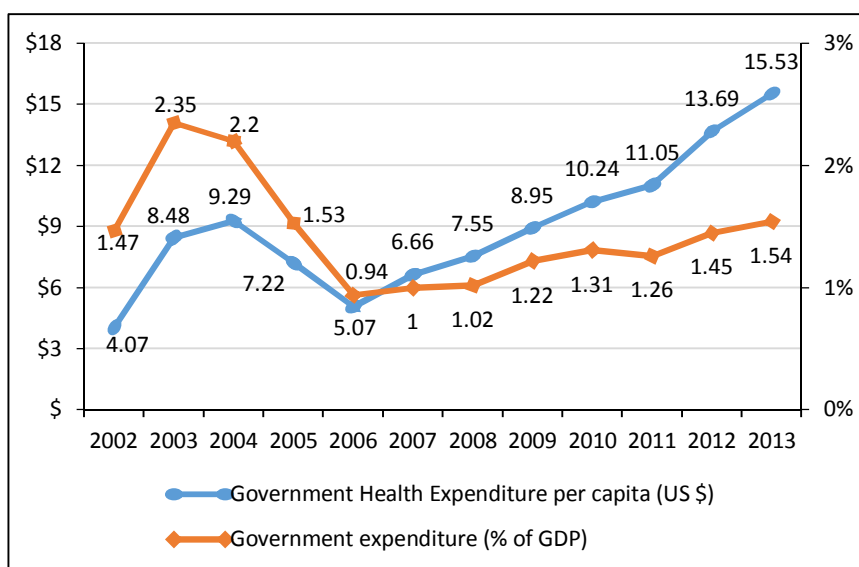
although WHO has not officially adopted this target (Sayedoff 2003). The available data has illustrated Cambodia's high expenditure on healthcare can be attributable to growing annual GDP and mounting health service demands. Nonetheless, this result shall also be viewed from the perspective of growing income inequality and behaviors of service users in seeking health service. It is worth noting that the upward trend of health expenditure per capita and as a share of GDP should take into account of significant economic factors such as growth of household earnings, remarkable country economy and decreasing poverty rate over the last ten years. This might reflect positive background of people capability to pay for illness and availability of investment on healthcare.

4.1.1.2 Government Health Expenditure

Government budget contribution in lieu of donor funding is a worthwhile consideration on the problem of budget constraints, which may be subject to unpredictable continuity of donor funding. The proportion of government revenue contribution for HEFs is noticeably low when we consider huge amount of out-of-pocket health expenditure (60% of total health expenditure) that could bring vulnerability to the poor who face financial constraints in purchasing healthcare. Upon this high volume of spending, the urgency to further speed up key health indicators and quality of medical services, government are considered an important role to play in contributing to share of health expenditure that complements the amount of financing collected from health partners to ensure certainty of efficient fund collection for

financing schemes. Minimal contribution from government has limited capability of health sector to finance public health service delivery to population and possibility of expansion service coverage to the poor and vulnerable in particular.

Figure 7- Government Health Expenditure



Source: WHO National Health Account

Furthermore, when we examine the percentage of government funds allocated to health sector, the proportion appeared to be negatively diminishing over the last five year periods, in comparison with the proportion at the initial HEF implementation from 2003 to 2005. Total government expenditure amounted to 15.5\$ per capita 2013, whereas percentage of the expenditure has remained low over the last ten years, accounted for only 1.5% of total GDP in 2013. The proportion of Cambodian government spending for one patient was very low in comparison with expenditure by its counterparts

from ASEAN member nations (Sagarik 2014). The figure signifies the shift in national budget allocation for health sector by government, which could reflect on deviation in government development priorities to other sectors than health sector.

4.1.2 Level of Population Coverage

Coverage is a key issue of health financing and it is a fundamental feature that guides our understanding of health financing performance. The potential of examination on coverage rate of beneficiaries provided under HEF will enable the investigation on analysis how HEF operation effectively collected sufficient funds that rendered improvement of health delivery to population. The underlying relevance of examining this issue is that coverage could lead our understanding on the efficiency of resource generation, financial accessibility for financial risk protection.

Table 4- Population Coverage under HEF

Year	% of Poor Population covered by HEF	Total country poor population*
2008	11%	4,005,404
2009	21%	3,143,941
2010	35%	2,931,180
2011	79%	2,802,690
2012	78%	2,717,064
2013	93%	2,906,150

Source: MOH Health Progress Report 2012, 2013, MOH Health Financing Report 2012

*Note: *Author own calculation based on population census of CSES (2013) & poverty headcount by Ministry of Planning (2014)*

The table shows that that HEF has expended health service coverage to approximately 2.9 million poor population who are identified with poor

identification from pre-identification and post-identification methods. According to WHO report in 2009 on the assessment of health financing in Cambodia, health insurance which include HEF, has not fully optimize the coverage rate, which remain very low. However, HEF operation has produced drastic positive change in coverage rate within the last five years. With only 11% of poor populations were able to take advantage of HEF benefit packages for health payment in 2008, climbing up to approximately nine folds higher to 93% of the poor identified for HEF five year later. What is astounding about this coverage was a recent sharp increase in coverage rate within one-year period, rising from 78% in 2012 reaching 93% in 2013.

4.1.3 Level of Financial Risk Protection

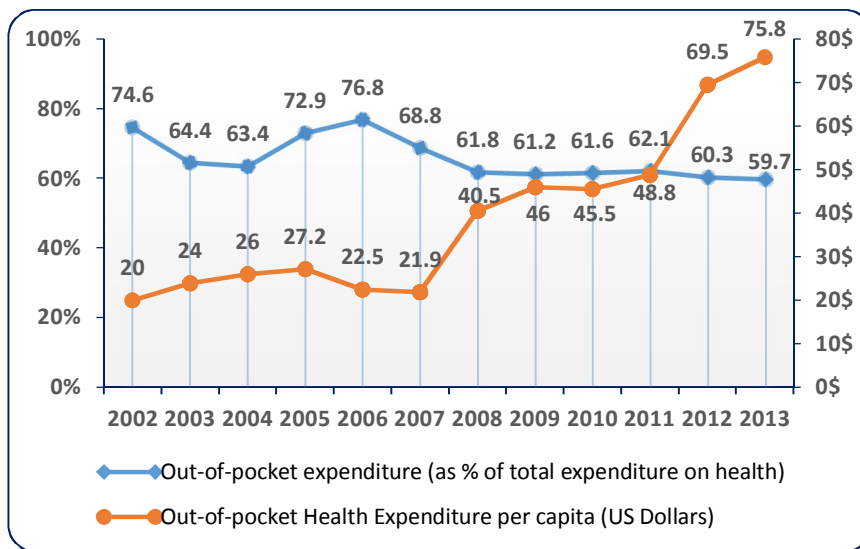
To date, Health Equity Fund provides financial protection to those who are enrolled in this financing scheme. The excessive volume of OOP expenditure on healthcare purchasing is tangibly high in comparison with THE. OOP expenditure has dominated 60% of THE in 2013. CDHS 2005 data showed that 86% of women from the lowest income quintile compared with 54% of women from the highest quintile report their need of money for health treatment. Moreover, public prepayment share in Cambodia health sector ranges from 20% to 40% of THE in Cambodia (Langenbrunner 2011), which is far below than WHO recommendation of 70% on prepayment ratio of THE (Carrin 2011). The prepayment share signifies the extent to utilize means of common sharing in health spending for sufficient resource.

4.1.3.1 Out-of-pocket Payment and Catastrophic Expenditure

Examination the amount of OOP is integral to expand our understanding of the strength of health expenditure and sufficiency in funding mobilization in process of scaling up Health Equity Fund mechanism. Current healthcare system extensively depends on OOP, which Ministry of Health introduced in 1996 on the charge of user fee with exemption for the poor as a cost-sharing financial measure to support the operation of health facilities. The large expenditure from OOP has significantly contributed to THE, which means a burden to service users on healthcare cost, particularly the poorest members are the most subject to exclusion to gain services with limitation of ability to pay with their own money in society.

Within the last ten years period population has tremendously spent their private money to purchase services at facilities on illness from 2002 that Ministry of Health initially put Health Equity Fund into formalized implementation at decentralized health district level. Following the introduction of such financing scheme, the amount of OOP has fell sharply on the first five years of implementation by around 4% annually until 2008, the critical year that government began building more solid national health financing framework for universal healthcare concentrating on utilizing Health Equity Fund to subsidize for fee exemption on inpatient and outpatient services. With more comprehensive financing policy framework, the percentage of OOP kept steadily decreasing on annual basis to 60% of total health expenditure in 2013 from 77% in 2006.

Figure 8- Out-of-pocket Health Expenditure



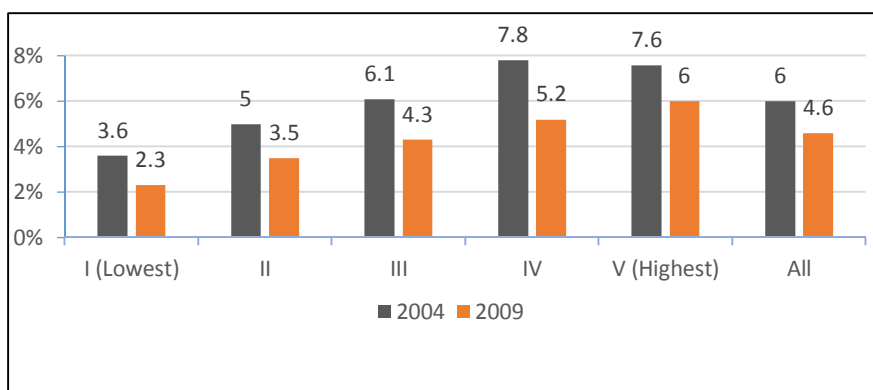
Source: WHO National Health Account

Figure 8 shows large amount of out-of-pocket health expenditure which people used to purchase health services. Although health sector relies upon the excessive percentage of OOP on health spending, the trend has steadily plummeted, which illustrates the decreasing number of population health expenditure in the last five years. Excessive OOP denotes limitation of affordable health accessibility to population group with enough capacity to pay for service charge. The upward trend of individual spending has forced family households to spend higher upon visiting health facilities, which poses a major barrier to absolute poor population, particularly those living in the lowest economic quintile, to feel hesitate to visit health facilities and access health demands.

Nonetheless, the decrease in private health expenditure could have occurred in association with the MOH's introduction of institutionalized

strategic plans such as the 2005 National Equity Fund Implementation and Monitoring Framework, Strategic Framework for Health Financing 2008-2015, and Health Sector Strategic Plan 2008-2015. These regulatory tools emphasize the support of the utilization of health financing with HEF as a foundation of financial protection toward universal health coverage, and they have updated health financing oriented policy, aiming at protecting the poor and mitigating the proportion of out-of-pocket health expenditure.

Figure 9- Percentage of Households with Catastrophic Expenditure by Economic Group



Source: CSES 2004 & 2009

Catastrophic expenditure occurs when the amount of OOP expenditure equal or higher than 40% of household's capacity to pay or non-subsistence income (Xu 2007). According to GIZ report 2014 of out-of-pocket and catastrophic expenditure on health in Cambodia, on average 5.4% of households at ODs with HEF face the challenge of catastrophic expenditure lower than 7.9% of households at ODs without HEF. Figure 9 indicates that 6% of households confronted with catastrophic expenditure in 2004 when it declined to 4.6% in 2009. In both year observed, those staying within group

IV and V economic quintile spent relatively higher than the other groups and the gap of catastrophic health expenditure has been narrowing.

4.1.4 Sustainable Revenue Collection

Government national budget for health is the core financial component that can ensure successful and durable functioning of Health Equity Fund from cost constraints. Financial sustainability of health financing needs a review with a well-functioning tax collection system of the state to mobilize adequate funds from public contribution into national revenue allocated for public service rendering, the proportion share of government revenue and external aids into health sector development. Financially sustainable HEF is closely linked to the nature of administrative cost for operation (Jacobs and Price, 2007).

4.1.4.1 External Funding

Over the years, high dependency of HEF administrative cost on unpredictable external source of funding from health partners has posed a challenge to direct efficient funding while increasing demands on expansion of service coverage are taking place (MoH 2014). Government subsidies alone have not fully protected the poor against risks from non-medical related payment. According to Inter-ministerial Directive No. 809 on support of paying for poor patients 2006, government subsidies do not cover administrative cost, transport, and food for patients and caretakers, which influences on health service delivery to the poor and vulnerable patients.

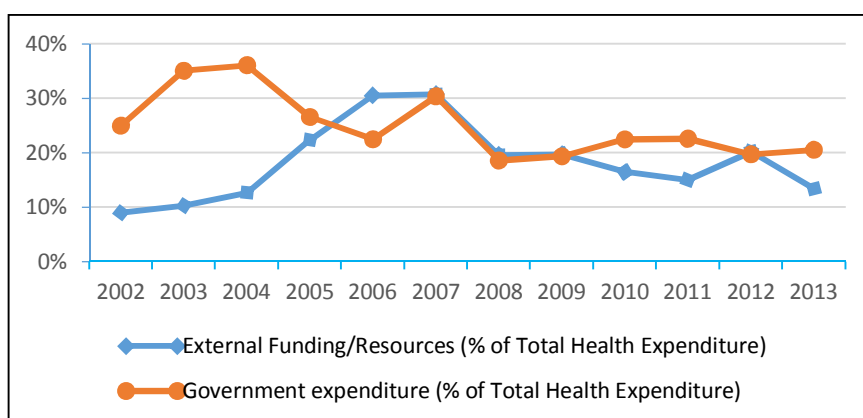
Health sector development has been a part of key policy objectives of Cambodia's national strategic development policy for achievement of Millennium Development Goals. Cambodia has become signatory of the 1991's Paris Declaration, which immensely open door of opportunities for Cambodia, as the low-income country, to receive large financial assistance from donor countries in different part of the world. In this regard, the government has taken these opportunities to make use of external aids for its national development. As a part of country's strategic development policy, government has attempted to expedite effectiveness of aids from partner countries through devising national strategic policy, and development intervention mechanisms for different sectors including health sector development. Hence, utilization potentials of foreign aid and adjusting country national development priorities with donors' aid policies to consolidate aid alignment and harmonization for health are important to realize Cambodia's strategic health policy entailed in Health Strategic Development Plan 2008-2015.

With increasing annual growth in population income level in the wake of recently high economic growth around 7% over the last five years, Cambodia development context entailed moving steps to economic development and health progress. Flow of donor funding into health sector has highlighted country reliance on foreign development assistance from partner donor countries and major international organizations. Improvement in major development sectors in the country remains driven by heavy reliance on foreign aid that characterizes development pattern of Cambodia (Chanboreth,

2008). On the other aspect, allocation of development aid in Cambodia features the government commitment and the extent of alignment of aid disbursement between donor and government on development priorities.

External aid has constituted comparably large proportion of health spending with government budget in total health expenditure (Figure 10). Cambodia health sector has relied upon donor aids, which has been inconsistent with national priorities for health due to high emphasis of financing is highly concentrated on particular diseases within national programs (Langenbrunner 2011). On one hand, donor financial assistance may allow Cambodia to move forward to expedite health development while minimizing financial constraints for service users. Considering aid dependency, Cambodia financial readiness, on the other hand, might fall into risks to maintain sustainable financing with unpredictable volume of donor financial assistance for innovation of HEF financing implementation and operation of major health programmes.

Figure 10- Government and Donor Funding for Health



Source: WHO National Health Account

The fluctuation in amount sharing of revenue contribution from government funds and those from external donors could arrive at two different assumptions. First, the reverse trend of government and donor expenditure on healthcare with increase of government revenue and decreasing amount of donor funds, to a certain extent, indicates positive point of diverting from government overt dependency on donors to finance health system functioning. On the other perspective, the decreasing pattern ratio of funding in both government and donor from 2007 could demonstrate greater aspect of risks in sustaining financial resource base, when we take into account of volatile financial strength to allocate sufficient budget for HEF operation in national health financing.

Table 5- Development Aids in Health Sector

Year	Aid for Health (million US Dollar)	Total Aid (million US Dollar)	Total Disbursement (%)	External Debt in Public Sector (% of GDP)
2002	67.6	530.9	12.7%	
2003	83	539.5	15.3%	
2004	95.8	555.4	17.2%	
2005	110.2	609.9	18%	
2006	109	713.2	15.2%	
2007	107	777.2	13.7%	
2008	136.6	978.5	13.9%	
2009	161.7	1,000.10	16%	29.1%
2010	196.4	1,074.70	18.2%	29.3%
2011	192.8	1,235.20	15.6%	30.3%
2012	149.7	1,140.80	13%	30.6%
2013	58.6	841.1	6.9%	30.7% (estimate)
2014	27.3 (estimate)	544.6 (estimate)	5%	30.3% (estimate)

Source: IMF 2012 & CRDB 2013

However, the figure from Table 5 illustrates the trend of health sector development, which showcases Cambodia heavy aid dependency in contribution to expenditure in health sector. Moreover, the country is facing burden on external debts of 30%. Remarkably, huge reduction of aid disbursement from 2013 to 2014 could reflect government and donor decision to place less emphasis priority on health sector development.

WHO (2009) indicates that resources from general taxation is integral for sustainability of HEF for contributing to universal health coverage. In general, from observation of health financing experiences from low and middle income countries, financial source that guarantees sustainability of health financing is associated with utilization of tax-based revenue and government disbursement of national budget guided by government decision on development priority (Gottret & Schieber 2008).

4.1.4.2 Government Tax Revenue

Government tax revenue in proportion to country GDP has shown downward pattern in mobilizing revenue for supporting public sector. The most recent figure, particularly between 2012 and 2013, illustrates massive cut of national budget on health from government tax revenue down to only 5% of GDP. In absolute term, the taxed-based budgets from both direct income tax and VAT for health remain at low and weak financial base. Overall, the percentage of share of tax revenue has seen in elastic volatility in government tax revenue from both direct income tax and indirect VAT tax to support public funding. This significant change explains low capability of financial

context in government to raise public fund for public health service rendering. This backdrop is tangible in Cambodian health sector, which is different from financing practiced by countries utilizing revenue from tax collection as the main financial resource for universal health coverage such as the case of Thailand (Mills, 2007).

Table 6- Cambodia Tax Revenues as Percentage of GDP

Year	Direct Tax (Profit, Salary, Rental)	Value Added Tax (VAT)	Total Tax Revenue
2008	1.6	8.5	10.7
2009	1.7	7.5	9.8
2010	1.7	8	10.2
2011	1.8	7.7	10.1
2012	1.6	7.2	9.3
2013	N/A	N/A	5

Source: IMF at www.imf.org

Carrin (2008) specified on sustainability of financing to reach universal healthcare that health system requires strong base of either dependency on single taxed-based financing or/and social health insurance mechanism. From this financial perspective, HEF sustainability has not reached certain degree that guarantee financial security to contribute to universal healthcare since Cambodia's social health protection based on general tax revenue has not fully institutionalized into concrete implementation framework.

Furthermore, health financing budget largely comes from government subsidies in combination with external funding. Sustainability of financial administration of Health Equity Fund under condition of current aid flow and government national budget allocation has turned out to be a persistent

challenge for policy makers, on the condition of economic growth, tax administration system and government financial commitment.

In 2012 General Department of Taxation of Cambodia pointed to the ongoing issues of insufficient tax collection due to limited capacity of human resources and weak tax policy that Cambodia is facing. Considering currently low tax-based revenue and government reliance on weak tax system for revenue generation, which is the main source of funding for health, it is not enough to conclude the sustainability of HEF financing, which has substantially derived from allocation of government national health budget for Universal Health Coverage.

4.2 Pooling of Fund

4.2.1 Level of Pooling

Major HEF health financing mechanisms operate in different forms as either separate schemes or pooled schemes among different HEF implementers, in which funding generally derived from donors and government funds. Pooling of fund provides financial protection to beneficiaries through spreading risks across different HEF implementers and tiers of population. It is important in a sense that everyone under financing scheme share the risks from health expenditure so that everyone has shared responsibility on payment of unpredictable health expenditure, which otherwise would be burdensome for those excluded from the risk pool.

To date, risk equalization measure for the poor has been conducted through HEF as subsidized schemes that combined funds from taxation and

donor funding. Nonetheless, Cambodia system of health financing is currently confronting with serious fragmentation among health financing schemes, particularly with a mixture of separate and small multiple risk pooled HEF schemes for demand-side financing mechanism. Across different HEF schemes, funds particularly from donor contribution remain some degree of segmentation based on voluntary basis within the system (WHO 2009). Annual Performance Monitoring Report 2013 issued by Ministry of Health provided evidence that only 21% of total funds from contribution of government and different health donors for HEF schemes has been pooled by 2013. What remain challenging is that Cambodian HEF has not clearly established regulatory tools that require compulsory membership for contribution of co-payment from individuals working in formal sector into core operational budget for social health protection. Cambodia has established in 2002 “law on social security schemes for persons defined by provision of the labour law” that requires ministry of health to encourage mandatory co-payment for social health protection from formal sector. However, regulatory rules on compulsory formal sector contribution into national health insurance scheme remains periphery at ministerial level.

HEF pooling system is subject to agreement among different supply-side HEF implementers upon registration of eligible poor beneficiaries. Risk sharing from those in informal sector is still problematic (Jacobs, et al. 2014). The registration depends on contingent supply-side such as health facilities and local authorities to identify eligible poor to utilize resources under the scheme for payment of healthcare during hospital visit. In addition, there are

no structurally fixed prescriptions of how much service purchasers with HEF need to share the burden of health expenditure as a co-payment on top of HEF payment from implementers. Such kind of individual contribution from beneficiaries is determined on the ability to pay, based on analysis of individual case of disease and patient financial status.

For Cambodia, introduction 2008's Strategic Framework for Health Financing, and more recent adoption of Health Sector Strategic Plan 2008-2015 has placed attention to undertake the critical step of improving a fragmented health financing system. Pooling of risks in health payment has embedded into major aim of national health financing policy in order to provide population with universal health coverage. While central health financing policy objectives is to expand coverage more holistically, the figure of current pooling of external funds for HEF does not fruitfully satisfy the universal healthcare initiative. Hence, it is demanding to consolidate different HEF schemes for the promotion of equal share of risk payment. Having legislation and regulatory frameworks on mandatory co-payment for all, a big challenge in securing financial accessibility will remain for health financing. Institutional policy and administrative management of HEF operation are important tools to mobilize resources, facilitating difficulty in pooling HEF funding agencies.

4.3 Purchasing

4.3.1 Equity in Purchasing Services

Cambodia population around 20% is staying under poverty status with earning capacity less than one dollar a day. Ability to pay for health

expenditure is importantly dependent on earning or consumption of households. From analysis of CDHS 2010 data in table 7, it is noted that men and women covered by HEF schemes are significantly capable to access health services, especially the poorest groups with 14.5% and 20% respectively. However, the overall percentage of coverage between male and female patients across economic quintile remains marginal, but large gap exists by gender, particularly among women in middle, second and lowest economic quintile approximately 50% different. The trend of coverage to beneficiaries illustrated positive distribution of HEF in terms of spreading percentage of the poor with different income level, particularly those staying within the poorest condition. This finding complements to the finding from (Jacobs and Price 2004) that otherwise claimed those in high wealth status are able to gain greater utilization of health services from service providers at health facilities, which cause burden on user fee for patients in the lower poor status.

Table 7- Percentage of HEF Coverage by Gender aged 15-49

Background Characteristics	HEF	
	Coverage for Men	Coverage for Women
Wealth Quintile		
Lowest	14.5	20.7
Second	10.1	12.2
Middle	5.5	6.9
Fourth	3.3	4.3
Highest	0.9	1.2
Geographical Areas		
Urban	3	3.8
Rural	7.3	9.8

Source: CDHS 2010

The poorest groups are able to receive the most of HEF benefits to purchase services from health providers at public facilities since the figure is particularly highly concentrated among the poorest groups in rural areas with decreasing pattern as level of economic status progress toward the richest group. This analysis is consistent with Whitehead (1992) who postulated that equity shall be concerned with providing equal opportunities for health with the extent that the lowest group of population also gains access to health.

4.3.1.1 Benefit Package for the Enrolled Population

According to guideline on implementation of HEF issued by Ministry of Health in 2009, HEF offers enrollees two main benefits, which are direct and indirect benefits packages. Patients receive benefits for health intervention in accordance with the degree of their private income constraint to shoulder health expenditure. The benefit provision from HEF serves broad coverage of spending on healthcare and non-healthcare cost.

Direct benefits include the two central types of health services Complementary Package Activities (CPA) and Minimum Package of Activities (MPA). CPA covers health services such as curative, preventive, rehabilitation and palliative care provided at provincial and referral hospitals while Minimum Package of Activities (MPA) includes primary healthcare, and health education at health centers. Also, patients extra expense on food, transportation, funeral, cost for transferring patients to referral hospitals, and cost for caretakers accompanying patient stay at hospitals are also a part of benefit package.

Ministry of Health has prescribed that 60% from HEF payment for user fee will be used as extra incentive to health staffs in addition to their salary while 40% goes to improvement health service quality including purchasing of essential drugs and medical materials for operation at health facilities. The benefits HEF are tempting toward providing more comprehensive reimbursement of different type of charge for patients eligible to access HEF include the following:

1. Patient registration and administration
2. Ambulance transport, Medical examinations, treatment, and hospitalization
3. Nursing care and diagnostic tests
4. Necessary medicines and medical materials by hospital
5. Generic prescription in case of chronic disease requiring continued medication for outpatients

Identification of the poor helps leverage smooth opportunities for registration the identified poor to gain convenient access to HEF upon their needs for health maintenance and contingent treatment against illness at the point of hospital visit. This advantage could minimize household concerns over poverty due to health expenditure and related costs. Facilities, where HEFs are operated, find their service management more organized to run HEF schemes in a way that they can identify who should get paid and who should not receive contribution under HEF schemes. Moreover, identification of the poor facilitates the reimbursement of healthcare cost. The contribution of

payment from a third-party helps ensure the HEF beneficiaries receive special protection with financial support on their illness and this may smooth health service delivery to the target patients.

However, HEF benefit package delivery has not fully harmonized among different schemes. The absence of data on amount of expense and varied proportion of contribution to the poor across different HEF schemes makes the feasibility to assess if the benefit packages are responsive and equitable to cover the actual cost of patient spending marginalized for the study to conduct comprehensive analysis.

4.3.4 Efficiency in Service Utilization

A well-functioned health financing mechanism is one integral composite in health sector plan for universal healthcare. The success of improving health financing necessarily depends on upgrading efficiency with policy intervention to optimize utilization of resources for coverage expansion (Kutzin 2013).

Annual Performance Monitoring Report 2013 of MOH indicates that total administrative cost was 12% in 2011, 20% in 2012 and rising to 38% in 2013 out of total budget for health expenditure. This cost covers purchasing furniture, office equipment, utilities, medical equipment, and other supplies. The current of cost of administration is high in comparison to total health expenditure for HEF. However, administrative cost for HEF implementation largely originated from external donors. In 2013 alone, total administrative

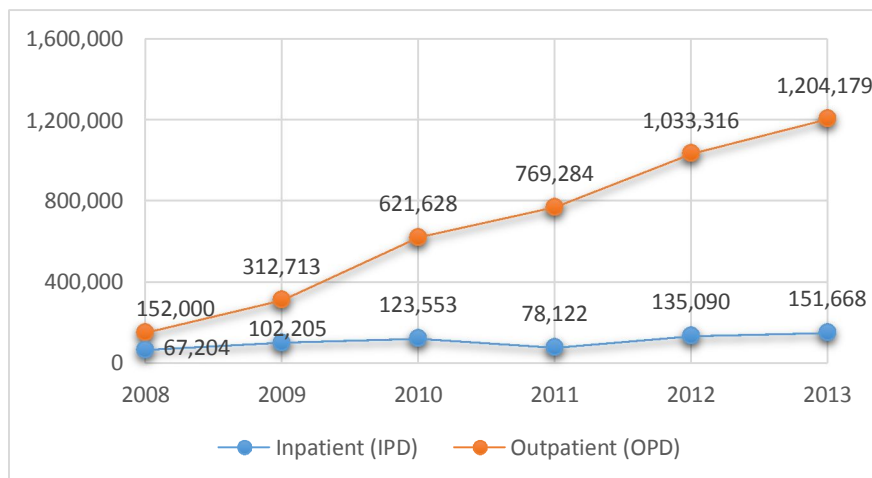
cost for HEF was amounted to 645,439 US Dollar, or 38% of 1,693,848 US Dollar of grand total cost (MOH 2014).

HEF has followed positively reach the deserved poor since helping population under poverty has emerged as the central of objective for pro-poor health policy at government and ministerial level. The policy of HEF on support poorest group of population become integral part of Cambodian government's National Strategic Development Plan 2011, Health Strategic Development Plan 2008-2015 and Inter-ministerial directive No. 809 between Ministry of Health and Ministry of Economy and Finance on support of paying for poor patients in 2006. The poor shall gain access to affordable health service with proper allocation of budget on service provision that should be done through reimbursement of user fee. The alignment of HEF objectives with supporting policy for health financing shows consistency with Bitran (n.d) study who emphasized on government political commitment in sustaining HEF for financing universal health coverage.

In practice, the potential of HEF emphasizes policy explicitly oriented toward making accessible services for poor beneficiaries with benefit package that helps remove financial constraints and establish enabling environment for the poor to approach public health facilities with minimal concern over health expenditure. With provision of health service free of charge and contributory reimbursement on non-medical expenditure, HEF imparts benefit packages to the enrollees, especially the poorest group, better access to affordable services from public health providers on preventive, curative, and palliative care at

referral hospitals and health center levels. However, there is limitation provision of services on mental illness and disabled people (GIZ 2014).

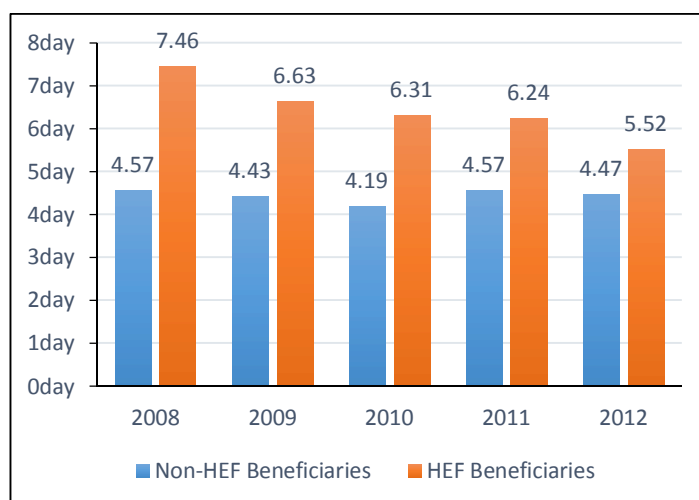
Figure 11- Inpatient and Outpatient Utilization (HEF)



Source: MOH Annual Performance Monitoring Report 2013

(Annear 2008) observed that Cambodian health sector has confronted with chronic issue in terms of low utilization of public health services and tiny attention on health service purchasers under HEF. As depicted from figure 11, health service utilizations for both inpatients and outpatients have continually experienced a dramatic positive annual increase, which was 30% for inpatients and 27% for outpatients. However, number of people was hospitalized saw slower steady rise compared with high increase in number among those who only visit hospitals for consultation of their illness. It is more likely to encourage health system management with provision of broad-based and inclusive service delivery. HEF broadens opportunities for the enrollees with outpatient and inpatient services, rewarding the poor with less financial constraints to attain utilization of public health facilities.

Figure 12- Average Length of Stay (ALS)



Source: MOH Annual Health Statistics Report 2012

In addition to increase of health service utilization, figure 12 shows that HEF beneficiaries stay at hospital to receive treatment is on average 6.4 days, which is comparably higher than average length of stay for non-HEF beneficiaries group around 4.4 days on average. The average length of stay for HEF beneficiaries is higher than non-HEF beneficiaries in all years observed. In general, HEF has productively reduced the average length of stay that could save financial spending for patients when the patients stay longer at facilities

4.3.4.1 Health Equity Fund Coverage by Facilities

The number of health facilities contracted with HEF has been on a steady increase, particularly in the number of new health centers to reach the poorest population groups. HEF has been designated much more to the level of referral hospitals, which offer (CPA services) with 84% of total RH has been

covered while only 60% of HCs is contracted with HEF schemes. Otherwise, the increasing number is highly concentrated to health center (MPA services).

Table 8- HEF Coverage by Health Facilities

Health Facility	2008	2009	2010	2011	2012	2013	2014
Operational District covered				58	65	72	77
Total OD				77	79	81	88
Referral Hospital	44	44	45	46	47	51	63*
				11	11	11	18**
Total RH covered							81
Total RH				82	83	86	97
Health Center	110	141	235	272	313	458	602*
				57	57	57	57**
Total HC covered							659
Total HC				1,004	1,024	1,088	1,105

Note: * HEF funded by government & health partners

** HEF funded by government

Source: MOH Health Progress Report 2014

The spread of HEFs to health facilities has increased to 58 in 2011 to 77 of total 88 operation districts nationwide. From the table, it indicates that health service delivery under HEF has placed greater attention on providing service to achieve more preventive and sophisticated curative care at referral hospitals to produce broader direct impact to local community in combination of primary healthcare provision at health center levels.

4.4 Implications

Considering the emerging concept of universal health coverage for developing countries to pursue, the study has demonstrated an initial attempt

to give a comprehensive picture of the current health financing implications from utilizing Health Equity Fund by Cambodian government and policy makers as model to move health performance forward to universal healthcare.

4.4.1 Theoretical Implications

Majority of literature has investigated on utilizing tax-based and social health insurance as health financing mechanisms for attainment of Universal Health Coverage. In the light of this generic emphasis, knowledge gap exist in regard to the synergy of the precedent study on alternative financing mechanisms that shall gain attention on its significance for developing countries whose health contexts are moving in transitional development towards universal healthcare. In the attempt of the study, contribution to complement knowledge on adoption of health financing, particularly Health Equity Fund, help us reflect on the existing knowledge gap, which has been limited and peripheral at comprehensive examination of health financing in the pathway to Universal Health Coverage in Cambodian health context. The findings have rendered scholastic understanding in a more descriptive framework under the scope of health financing mechanism based on theoretical base of health financing. In the future, the requirement for further empirical study whether health financing can switch from mixed sources of financing to taxed-based fund, as an exclusive source of funding in a broader context, is an interesting area for scholastic investigation. In addition, the feasibility of broadening HEF to cover both informal and formal sector is also

worthwhile for further research and government to consider in shaping health financing policy.

On top of that, the study proved a broader image on the important role of HEF for the universal healthcare initiative, so it thus extended theoretical understanding from precedent literature that mostly pinpointed on exclusive observation of explicit HEF schemes. It should be noted that the study has provided holistic view on applicability of Health Equity Fund to play its functional role as a financing method to address the issue of health accessibility and coverage of health service delivery for innovation on health sector development. Through examining performances with consideration of institutional policy of health financing has broadened our perspectives on characteristics of HEF adoption. This contributes to draw an outlook on health financing implication to renovate health financing framework, to expend public health services and to improve service quality for the future.

4.4.2 Policy Implications

At the other extent from theoretical implication that the study attempts to generate, the study served an anchor for government, and policy makers to consider facilitate necessary policy reform initiatives on the implementation design of health financing mechanisms on universal health coverage that Ministry of Health is pursuing. As illustrated in the study, Royal Government of Cambodia and Ministry of Health have undertaken robust reforms on health policies and institutional frameworks in order to expedite health financing in development of country health performance. The study has

produced findings from analysis of major performance indicators such as health service utilization, service coverage, and financing viability under Health Equity Fund in relation to health expenditure and policy objectives of national health financing that illustrated significant positive performance of health accessibility, and reduction of financial risks for the poor beneficiaries on healthcare payment. The findings are crucial and timely source of information in a way that the attempt to scale up Health Equity Fund could be evolving on consideration of a more pragmatic and holistic scope of health financing implementation of current HEF schemes. It is relevant that Cambodia underscores optimal efficiency and sustainability of HEF financing while considering applicable measures to develop enabling regulatory frameworks in order to safeguard health services users from health-related financial risks and to raise citizen confidence in quality of public health delivery.

This study found that health sector development with sound health financing scheme of HEF is moving in incremental transition to expansion of health service coverage to all population. However, persistent backdrop in massive out-of-pocket health spending is still hindering this initiative. This issue, thereby, slows down transition of health development to universal health coverage. Moreover, financial sustainability for health financing system is a core foundation for upgrading the feasibility of funding operation of HEF schemes and opportunities to mobilize source of financing. In this regard, the consideration on how to further institutionalize financing with supportive policy and strategic interventions to retain effective mobilization

of government and donor funding with focus on sustainability and effectiveness of functioning within the scheme. Therefore, this could drive the role of government and policy maker to embrace establishment of environment with enabling policy mechanisms that ensure efficiency and viability of health financing for better health performances that are more illustrative to improvement in health service delivery to the poor population.

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

With robust rate of economic development in annual GDP growth around 7% over the past several years, Cambodia has made a significant move in population health status. Along with this bold move in economic development, the study has pointed that health sector has demonstrated the role of Health Equity Fund as provisional financing mechanism toward universal health coverage. HEF has exhibited as a beneficial, efficient complementary method being implemented to optimize potentials of subsidized schemes from government-taxed financing on payment of user fee for coverage expansion to poor populations within informal sector, but financial sustainability of HEF appears unstable in the pathway to delivery of universal healthcare.

HEF has been utilized to accelerates health accessibility, mitigate health payment risks due to insufficient financial risk protection for the poor, and limitation of resources for efficient functioning of health financing while volume out-of-pocket payment remains high. Based on analysis of data from CDHS, National Health Account, and Health Progress Report the study found key supporting points such as HEF contribution to increase in health service utilization with rapidly increasing population and facilities coverage, falling OOP in total health expenditure, and significant reduction of average length of stay that minimizes patient's spending on illness upon hospital visit. HEF has

efficiently facilitated the enhancement of service utilization to the poor beneficiaries, in line with national health policies on improvement expansion and accessibility to health delivery for universal health coverage although the trend of funding from both government and external funding has maintained slight change over the last five years until 2013. This finding is similar to the study by (Annear, Wilkinson et al 2006; Annear, Bigdeli et al 2008) who observed varying degree of service utilization between HEF enrollees and the fee-paying patients that HEF patients were able to gain greater utilization. Examining the proportion of population coverage under HEF shows that HEF has boosted health service coverage, but this coverage is not complete to meet the objective of national health financing policy that aims for full population coverage. The sudden surge in population coverage in recent years helps explain the effective role of HEF functioning in fostering identification of the target poor to utilize affordable public health services, and rendering financial protection targeting pro-poor health intervention against health risks to healthcare.

However, HEF financial dependency, especially administrative cost, remains questionable on unpredictable external funds and government contributions that is moving in unstable trend with decreasing volume of financial resources to mobilize adequate funds to operate sustainable HEF schemes. The challenge of resource constraints from government in terms of insufficiency of tax revenue base and weak capacity of tax institution to collect funds form a hindrance to generate strong financial potential from tax resources for Cambodia health financing as a low-income country.

Attainment of universal health coverage, in the current context of Cambodia health financial viability, remains incremental demanding considerable time to reach. The reasons were due to volatile financial base to utilize HEF as a holistic complementary financing, weakness of regulatory tools on requirement of compulsory pre-payment contribution from individual for equitable cost sharing, and efficiency of resource collection to scale up service coverage was contingent upon low tax collection revenue and unpredictable financial contributions from donor funding. Clear policies on the attempts to accomplish universal health coverage are in place and Ministry of Health has set up health financing strategic framework to make way for further attempts to achieve universal health coverage in the future.

5.2 Recommendations:

As in explanation from previous analysis and implication section, there have been a variety reforms in regulatory and institution on health financing to bolster health outcomes and service impact on universal healthcare. The achievement of universal health coverage requires adoption of financial strategic intervention supported with conducive policy environment that goes in consistency with financial and technical capacity in financing management and health delivery.

It is very critical to understand that universal healthcare is a demanding process that involves political commitment, and funding sustainability with comprehensive framework and relevant policies at ministry level to guide monitoring and evaluation strategies on performance of HEF financing

schemes. Thus, collaborative supervision from relevant health partners and agencies with Ministry of Health on sustainable collection and use of resources are required. Responsiveness and effectiveness in international collaboration between ministry of health, government, and health partners is an important condition to align the unstable situation of financial viability of Cambodia health context.

Extensive improvement on revenue collection strength through strengthening state capacity in tax collection with solid tax policy reform is a useful way for government to consider for raising sufficient revenue for health. Risks of financial constraints in terms of weak tax revenue base, external debts, volatile economic growth, and low population income level suggests that further reliance on donor funding in complement with tax collection mechanism shall operationalize to support resourceful financial base that ensures continuity of financial collection capability for HEF financing. There should be requirement of government for a closer look on the proportion of funding allocation for health, quality of health service and institutional framework to stimulate the success of implementation, management, and monitoring of financing scheme in expansion of scope of services that are genuinely needed.

The concurrent high amount of out-of-pocket health expenditure could mean that total health spending requires more strategies to minimize this high personal payment from households and to consider extending funding to safeguard the poor against private health expenditure. Fragmentation in

pooling of funds across different HEF schemes is complicated and demanding since only half of HEF schemes are integrated into pooled funding. Difficulty lies upon consolidation those funds from different implementation agents in coordination of financing. This means that transition to universal health coverage for Cambodia requires consolidating financial arrangement of different types of financing scheme into pooled comprehensive scheme rather than separated schemes. In doing so, it requires holistic monitoring and evaluation assessment on effectiveness of overall HEF schemes in effective and timely manner.

Although coverage of the poor is significant, the issue of expansion of service coverage to population from different economic condition has also made a barrier in health service provision. This means that Ministry of Health needs to make further consideration on solving issue of health coverage and financial barriers to improve the situation. In order to fully utilize the role of HEF for the goal of universal health coverage, the extension of HEF benefit packages to the poor who have not been covered is worth considering.

Finding the poor who are qualified for receiving HEF is somehow fragmented as different HEF schemes may adopt separate evaluation criteria and procedure. It is important to improve identification methods on the eligible poor for receiving HEF by consolidation the standard of poor identification methods. Reaching the poor with HEF identification method has confronted with obstacle in defining clearly institutionalized procedures and consolidated guideline, which can be applied for different HEF schemes, to

differentiate those who are eligible to receive HEF funds and those who are not. In other word, identification of the poor has confronted with fragmentation of standardization. The process could be lengthy when it takes into account of lack of efficiency, resources, and time constraint. The difficulty arises since proper identification is, to a certain extent, operationalized by health staffs holding limited capacity to assess eligible patients for HEF at facilities. Therefore, existing separate procedures in poor identification of HEF schemes could be better improved with structuralized procedures and develop them as central national criteria, which are applicable for use on contextual evaluation different HEF implementers have followed.

The critical question is whether operation HEF alone is efficient enough to bring all the poor to get access to health services and maximize service coverage rate. Optimization of public health service utilization under HEF scheme alone is not comprehensive enough to gain full population coverage, which is the core objective of universal healthcare. Thus, taking advantage service expansion to those using services at private health facilities is one area deserving attention from government and Ministry of Health. The implementation should be in alignment of strategic health financing policy with public sector facilities.

It is necessary to note that HEF has gained focus from government, and external funding donors due to significant progress it has made to innovate service management, delivery mechanisms, and higher utilization rate with less financial burden to the target poor population. To attain the Universal

Health Coverage, government requires a closer look on the proportion of national funding it should allocate for HEF operation while considering quality of health service and institutional framework to stimulate the success of implementation, management, and monitoring of financing scheme in expansion of scope of services that are genuinely needed. In strategic framework for health financing, Ministry of Health has pointed out greater need of strengthening coordination partnership for financial and pooling arrangement. Thus, policy for integration donor budget and that from government should go in line with national health development priority and orientation to specific financing schemes, in which HEF should gain shrewd attention from government and health partners. Alignment in national health policy with development aid objectives of health partners is useful to scale up future extension of HEF to health facilities and encourage higher opportunities for the poor population to get affordable and equitable healthcare.

5.3 Limitation of Research

Resources and time constraints for data collection are challenging to conduct this research in a more empirical way. Yet, peer-reviewed journals, gray literature and official empirical data stored by WHO and health database system of government available from key experts, informants working with health financing schemes are major sources of information for analysis based on analytical framework developed from existing literature. Accessibility to data source is relatively difficult since they are not fully accessible to the public, and they can only be accessed by those who are working directly in

the financing program and health information management unit at Ministry of Health. Thus, this study may confront with unbalance in secondary data and primary data collection. Otherwise, the research would give higher weight of attention on secondary data obtained from existing research, journals, gray literature, and relevant government reports on social health protection in Cambodia.

The insufficient comprehensive data from government health database are limited posing the challenge of data availability. Otherwise, the problem of reliability in analysis of this study depends on the accuracy of data tabulation of primary data, particularly those collected from government data sources, to cover complete understanding of every detail analysis of health financing system in Cambodia.

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APPENDIX 1

Kingdom of Cambodia
Nation Religion King

Ministry of Health
No. 809

Phnom Penh, 13 October 2006

Inter-Ministerial Directive on Support for Poor Patients

The Minister of Health and the Senior Minister, Minister of Economy and Finance

- Having seen the Constitution of the Kingdom of Cambodia;
- Having seen Royal Decree no. 05SN/RKT/0704/124 dated 15/07/2004 on the appointment of Royal Government of the Kingdom of Cambodia;
- Having seen Royal Kram no. NS/RKM/0169/02 dated 24/01/1996 promulgating the Law on the Establishment of the Ministry of Health;
- Having seen Royal Kram no. NS/RKM/0196/18 dated 24/01/1996 promulgating the Law on the Establishment of the Ministry of Economy and Finance;
- Having seen Sub-Decree no. 67 ANKR-BK dated 22/10/1997 on the organization and functioning of the Ministry of Health;
- Having seen Sub-Decree no. 04 ANKR-BK dated 20/01/2000 on the organization and functioning of the Ministry of Economy and Finance;
- Having seen Royal Sub-Decree no. 78 ANKR-BK dated 18/12/2004 on the additional and revised departments of the Ministry of Economy and Finance; and
- As required for poverty reduction policy,

Decide

- Article 1: It is allowed to use national budget as part of the budget of the Ministry of Health (MOH) to cover the fees exempted for health services used by the poor at the national hospitals, national centers, referral hospitals and health centers in order to improve quality of public health services and to promote poor people to use health services at public facilities
- Article 2: The per case reimbursement of user fees exempted for the poor are defined as followed:
1. National hospitals and national centers
 - Hospitalization = 80,000 Riels
 2. Referral hospitals: for patients hospitalized until recovery
 - Complementary Package of Activities level one (CPA I)
(Referral hospitals without surgery) = 40,000 Riels
 - Complementary Package of Activities level two (CPA II)
(Referral hospitals without surgery) = 50,000 Riels

- Complementary Package of Activities level three (CPA III)
(Referral hospitals with all specialization) = 70,000 Riels

3. Health centres

- Inpatient = 10,000 Riels
- Outpatient = 1,000 Riels

- Article 3: The MOH is responsible for development of mechanisms to identify poor people based on appropriate criteria, which ensure equity, justice and transparency (the identification criteria will be provided as Annex).
- Article 4: Implementing agencies are responsible for preparing all necessary documents for evaluation of poor patients as indicated by the Annex in Article 3 to be submitted to the MOH for requesting budget from the Ministry of Economy and Finance;
- Article 5: Funds will be released on a quarterly basis through payment voucher after proper documents in accordance with financial rules are received.
- Article 6: The generated funds from this user fee reimbursement as indicated in Article 2 will be managed within the concerned facilities as follows:
-60% for incentives of health workers
-40% for recurrent costs to support the routine activities of the facilities in order to improve the quality of health services
- Article 7: The Ministry of Economy and Finance, the Ministry of Health and related institutions should closely monitor and evaluate the implementation of this Directive, mainly the fund management and related activities
- Article 8: Directorate General, Secretary General, Departments, Provincial Health Departments, Provincial Departments of Economy and Finance, National Treasury, National Hospitals, referral hospitals, health centers and other related institutions under the MOH and Ministry of Economy and Finance are held responsible to implement this Directive, from the date of signature.

Senior Minister
Minister of Economy and Finance
Signature and stamp

Minister of Health
Signature and stamp

HE Keat Chhon

HE Dr Nut Sokhom

Copies for:

- Secretary General of Senate
- Secretary General of National Assembly
- Cabinet of the Prime Minister
- Council of Ministers
- Ministry of Health
- All Provincial/Municipal Governor Offices for information and implementation as in Article 8
- Archive

APPENDIX 2

MINISTRY OF HEALTH

Referral Hospital of.....

Post- Identification Questions for Equity Fund Beneficiaries

Date of Interview:/...../200...

Name of Interviewer:.....

I. Biography of the Patient

Name of the patient..... Age..... Sex..... Nickname..... Marital status.....
 In case the patient is not able to be interviewed, Name of Interviewee..... Relationship to the Patient.....
 Date of Hospitalization..... Section/Department..... Bed number..... Number of patient.....
 Address of the Patient.....

II. Socio-Economic Status

1-Number of family Members							
Name	Nick Name	Age	Sex	Relationship	Occupation	Education	Others
1-							
2-							
3-							
4-							
5-							
6-							
7-							
8-							
9-							
10-							

Q2-House	Descriptions	Code #	Q3-Electronic	Code #	Q4-Electricity	Code #
A-Roof	Thatched/Leave/Tent	0	A-None , Radio	0	A-None, Kerosene	0
	Tiled/Zinc/Tin sheet	1	B-Tape/TV (Black & White)	1	B-Battery < 50 Ampere	1
B-Wall	None/Leave/Bamboo	0	C-TV (Color)	2	C-Electric buying	2
	Wood	1	D-I COM Radio (Base)/Hand phone	3	D-Owner ship of generator	3
	Cement	2				
C-Floor	None	0				
	Bamboo	1				
	Wood	2				
	Cement/Tile	3				
D-Condition	Worst	0				
	Good	1				
	Best	2				

Q5-Transportation	Code #
A-None	0
B- Bike/ Small Boat	1
C-Horse/Ox cart	2
D-Motor boat/Motorbike/Motoring	3
E-Vehicle/Power Tiller	4

Q6-Productive Lands	Code #
6.1-Size	
A-None	0
B-< 01 Hectare	1
C- 01-02 Hectares	2
D->02 to 05 Hectares	3
E-> 05 Hectares	4
6.2-Quillities (Land category)	Code #
A-Third Category	0
B- Second Category	1
C- First Category	2

Q7-Farm Assets	Code #
A-None	0
B- Plough.....	1
C- Dragging Cows/ Buffalos and Horse	2
D-Water pump	3
F-Tractor/ Tiller machine	4

Q8-Livestock	Code #
A-None	0
B-An adult pig/<30Chickens/Ducks	1
C-02 Adult pigs/>30Chickens/Ducks	2
D- Goat more than 02 One cow/oxe / buffalo	3
E-More than 02 of Oxes/ buffalos/ houses	4

Q9-Cash Income/Person (Per day)	Code #
A-<2,000R	0
B-2,000R to 4,000R	1
C-4,100R to 8,000R	2
D-8,100R to 16,000R	3
E->16,000R	4

Q10- Number of dependent members and vulnerable.	Code #
A-Elderly/Disable/Orphan (>02)	0
B-Elderly/Disable/Aphelion (01)	1
C-None	2

Q11-Length of severe illness in last one year	Code #
A->30 days	0
B-15-30 days	1
C-5-15 days	2
D-<5 days	3

Q12-Health costs (Combined family members in last one year)	Code #
A->500,000Riel	0
B-200,000 to 500,000Riel	1
C-<200,000Riel	2

Q 13. Has your family ever borrowed money when your family member(s) was/were sick?	Code
A. Has borrowed	0
B. Never	1

III. Evaluation of the Interviewer

Total Scores: The result of interview shows that the patient is: Extreme poor ☐ Poor ☐

Date:...../...../200.....

Signature of Interviewer:

I, undersigned, claimed that all the answers provided by me above are correct. If there were incorrect, the EFH has the right to postpone all assistance and I promised to reimburse all the expenditure provided by EFH.

Thumb or Signature of the Patient/ Relationship

Note:

- A- Score from 0 - 10 : Extremely poor
- B- Score from 11 - 18 : Poor
- C- Score equal or above 19 : Non-poor and rejected

캄보디아의 의료형평성기금에 의한 보편적 의료보장 확대에 대한 연구

Sophearun In

글로벌행정전공

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공중보건 개선은 캄보디아에서 가장 근본적인 개발과제에 해당한다. 의료 영역의 개선 필요성에 따라 국가는 국민의 보편적 의료 보장을 위해 합리적 가격과 평등한 의료 서비스에 대한 접근과 보다 더 나은 의료를 위한 개선 도구로서 보건 재정에 대한 지속적 노력을 시도하고 있다. 보건 재정의 핵심적 기제로 의료형평성기금 (HEF)이 보건 정책의 주요 개혁과 함께 보편적 의료 보장을 촉진하기 위한 방안으로 도입되었다. 저개발국가로서 캄보디아는 비공식 сек터 내 인구 대부분을 차지하는 많은 빈곤층에게 의료 서비스를 제공하기 위해 의료형평성 기금을 확대하기 위한 보건 재정을 유지해야 하는 도전에 직면해 있다.

본 논문은 보편적 의료보장 목표를 달성하기 위한 시스템으로서 의료형평성기금의 운영과 보건 기능 경험을 연구함으로써 캄보디아 내 국가보건재정체계를 탐구하고자 한다. 의료전달체계의 활용 확대와

목표 빈곤계층에 대한 의료 서비스 제공 접근 확대 의료 시스템의 핵심 성과 생산에 있어 의료형평성기금이 어떤 역할을 탐색함으로써 의료형평성기금이 지금까지 달성한 성과와 진보를 분석하고자 한다. 의료형평성기금은 보편적의료보장을 위한 전환기적 재정조달시스템으로 기능해왔다. 의료형평성기금을 활용한 보편적의료보장 달성은 효율적인 재정조달시스템임이 입증되었다. 의료서비스 제공 강화와 빈곤 수혜계층을 위한 재정적 위험에 대한 개입에 있어 의료형평성기금의 효율성에 대한 캄보디아의 경험에도 불구하고 보편적의료보장의 재정적 기반으로서의 지속가능성은 점차 증가하고 있다. 저임금국가로서의 캄보디아의 개발경험에 비추어 볼 때 재원은 보건 재정을 운용 가능하게 하는데 있어 핵심적인 요소로 작용한다. 그러나 본 연구의 분석에 따르면 외부 기여자에 의한 금융 흐름이 감소추세인 상황에서 보건 재정에 있어 현금지출이 가장 지배적인 상황인 것으로 나타났다. 다시 말해, 보건 재정 확보를 위한 재원 상황을 고려해 보건 데 보편적 의료 보장의 확보가 요원한 실정이다.

키워드: 자금조달, 보편적 의료, 의료형평성기금, 보건 재정, 보건 지출

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